THE

Southern Medical Record.

VOL. IV.—MAY, 1874.—No. 5.

Original Communications.

THE ANGINA OF THE THROAT.

QUINSEY.—EPIDEMIC TONSILLITIS A DISTINCT DISEASE.—THE DIFFERENCE BETWEEN TOXICOLOGICAL AND PATHOGENIC POISONS—THEIR RELATIONS TO EPIDEMIC DISEASES CONSIDERED. DIPHTHERIA—ITS PARASITIC ORIGIN.—THE THEORY OF OZONE CRYPTOGAMIA DISCUSSED.

BY A. S. PAYNE, M.D., OF VIRGINIA.

It is a divine truth, that from the "fullness of the heart the mouth speaketh;" for here I sit down to prepare a paper on small-pox, and find myself running off into the angina of the throat.

To arrive at a correct diagnosis, there are few diseases requiring at the hands of the practitioner of medicine a more careful examination than these anginose diseases of the throat. More particularly is this the case when their visit is paid in an epidemic form. Hence it is we find epidemic tonsillitis, a distinct disease, confounded with common quinsey, with scarlatina, with the ulcerative variety of diphtheria, with aphthæ, with thrush, and frequently with measles. Indeed, I have heard it called, by some physicians, rosalia; by others it is spoken of as a hybrid, between scarlatina on the one hand, and measles on the other. The semeiology of common quinsey or sporadic tonsillitis and those of epidemic tonsillitis are widely dis-

tinct,—the one always sthenic in its character, the other invariably asthenic in its tendency. The symptoms of common quinsey are so plainly, so strongly marked, that they cannot possibly be mistaken for any other disease; the symptoms of epidemic tonsillitis so faintly drawn, that it may be easily mistaken for several other of the anginose diseases of the throat. It is a frequent visitor in mountainous regions of country, where the climatic alternations are sudden and frequent. Unlike most eruptive "epidemic diseases," one attack affords no immunity from a recurrence of the disease, but rather predisposes to subsequent attacks. Children with thin skins, and of a sanguineous temperament, as a general thing, are most severely affected.

There is an eruption that belongs to epidemic tonsillitis which is pathognomonic, when seen, but, unfortunately, it is frequently suppressed. The eruption, in appearance, is between the measles and scarlet fever,—too pointed for scarlet fever, and hardly enough so for measles. Although if you rub your hand over the eruption, it has a harder feeling, is more papulous in its character, yet it is not as highly pointed as is the case in measles. I have seen this eruption, on the lower extremities of patients, assume a black color, and bearing a striking resemblance to varioloid. There is often a soreness of the scalp, followed by the eruption appearing just beneath the hair, and passing downward, just as is seen in small-pox. But I have never seen it appear upon the soles of the feet; nor does it travel by systematic stages, as small-pox is known to do. The mouth and posterior fauces show aphthous ulcerations, and there is usually some slight swelling and external soreness of one or both tonsils. As convalescence becomes established, the epidermis will be found to "bran off," instead of coming off in large flakes, as it does in scarlet fever.

In peculiar idiosyncrasies belonging to the tegumentary tissue of some patients, this disease would take on the appearance of erysipelas. Losing its own identity, this disease may degenerate into putrid sore throat; or the ulcerative process may go on unnoticed in the nares and posterior fauces, and result in death.

This epidemic was prevalent and widespread in this portion of Piedmont, Virginia, in the fall of 1872. It commenced in the latter part of August, and continued up to the first of December.

During the months of October and November, it began to affect the horses, very few farms escaping its ravages. It was rare for a lying-in woman to entirely escape from this disease, and often their lives were seriously endangered. In most of the cases occurring in lying-in women, this disease was peculiarly prone to take on the livery of erysipelas, but there was always some symptom present by which we could identify the influence of the prevailing epidemic.

I think I hazard nothing in pronouncing the widespread "epizootic" of 1872 an epidemic tonsillitis, typhoid in its tendency. In the horse, it may with propriety be termed a distemper, with strongly-marked symptoms, typhoid in their character. In the human, it might be termed, with equal propriety, a widespread epidemic of influenza, with a preponderance of typhoid symptoms. I remember to have had the disease in 1840, under the cognomen of the "Tyler grippe." I am aware that many able medical men in the North considered the "epizootic" trachitis, laryngitis, etc.; but I have given the diseases of the lower animals, for a number of years, much study, and I am sure, by careful examination, they will concede, with me, that it was really an epidemic of tonsillitis, affecting, in some portions of the country, the human and the horse alike. Very few cases of sthenic tonsillitis, or quinsey, if seen early, will die under the steady administration of blue mass, followed each morning by sulphate magnesia, with a fly blister to the throat. If you are called too late, and matter has formed, scarify the tonsils, and let it out with as little delay as possible. In ordinary cases, I use the coal oil to the throat, to be well rubbed in; flannel to be worn around the neck. In the epidemic or asthenic variety of the disease, the system must be sustained by stimulating remedies and nourishing diet, to enable the "*vis medicatrix naturæ*" to rally her forces, and come to the rescue. The ulcerations should be touched once thoroughly, by a saturated solution nitratis argenti, and then followed by a gargle of chlorate of potash and syrup of quince seed. Of the internal sustaining remedies, the chlorate potassa, Labarraque's chloronated solution, chloride ferri, pulvis zinziber, and quinine, will be found the best.

But before I go further into the etiology, semeiology, etc., of these angina, I wish to quote what has been so ably said upon the sub-

ject of poisons by my friend, the late Dr. Dowler, of New Orleans:

"In strict propriety poisons belong exclusively to the domain of toxicology, and are not assignable to the pathogenic category. There can be no harm however, in so extending the signification of the term "poison" to include every agency known and unknown. What acting on the organism causes it to depart from the healthy standard, provided in so doing, we do not compound together objects which are entirely distinct, and draw parallel conclusions from the most divergent premises. Let us therefore follow the acologists so far as to give this extension to the meaning of the term; and then it will necessarily follow that poisons must fall into two great classes; namely: first the toxicological and second the pathogenic. Let us compare or rather contrast these classes of poisons, and determine how they may be identified with each other.

1. Toxicological poisons are cognizable, appreciable, tangible and material. Pathogenic poisons have hitherto proven in their external and material character, either unknown, unappreciable and intangible, as in their relations to cholera, yellow fever, etc., or known and appreciable only when incorporated in, and coexistent with animal matter as in syphilis, variola, etc., otherwise being wholly unknown.

2. The organic manifestations which attend the action of toxicological poisons are remarkaby invariable and uniform, and respond to the agent administered. The organic manifestations, in those who have been exposed to the action of pathogenic poisons, are so variable in intensity that they may be either absolutely null, or exist in every degree, from the modest form of the disease to the most deadly, as is exemplified in cholera, yellow fever, small-pox, etc.

3. With toxicological poisons, the uniformity of the effect and organic susceptibility are remarkable. With the pathogenic poisons of yellow fever, cholera, diphtheria, etc., the want of this organic uniformity in susceptability is remarkable, absolute immunity attending one person, whilst a second is lightly, a third severely, and a fourth mortally attacked in the same appartment—proving first, that the pathogenic or objective cause must necessarily be endowed with an uniform potency; and secondly, that the variability of the organic phenomina must be owing wholly to unknown internal susceptabilities, and not owing to variable intensities of the prthogenic agency.

4. The intensities of toxicological poisons are known, determinate demonstrable. The intensities of power in pathogenic poisons we have inferred to be uniform as in cholera, yellow fever, diphtheria, etc. This does not however enable us to determine the measure of intensity of that power, as characterizing it under the denominations of strong or weak. For example, immunity from the disease might be urged to prove the intensity of organic resistance to a powerful pathogenic agent, whilst resulting mortality might be urged to prove intense organic susceptability to an extremely feeble agent.

5. Organic toxicological poisons are normal, and do not reproduce themselves in the organism, in which they induce toxicosis, as the poison of crotalus, scorpion, hornet, etc. Pathogenic poisons derived from an organic source are abnormal and tend to reproduce themselves, as the poison of syphilis, glanders, hydrophobia, etc.

6. Toxicological poisons act with increased energy and danger, on the young, the debilitated, the infirm, etc.; females being more easily affected than males. The pathogenic poisons of yellow fever, cholera, etc., as manifested in the same apartment, often destroy the powerful and robust, while the tender infant and the invalid are lightly affected.

7. The treatment of toxicological poisoning is strictly antidotal, and with reference to throwing off, counteracting, rendering inert, and neutralizing the poisonous agent. The treatment of pathogenic poisoning as in yellow fever, cholera, etc., is strictly antipathic, and is addresed to the morbid conditions present, and not to any assignable cause of those conditions.

8. No known toxicological poison is capable of producing organic conditions and manifestations, identical with those exhibited in pestilential diseases. No pathogenic poison is capable of producing organic conditions and manifestations identical with those superinduced by toxicological poisons.

8. Toxicological poisons generally teach avoidance by appealing to our sight, hearing, taste, smell and touch. Pathogenic poisons as in cholera, yellow fever, etc., have never yet objectively appealed to our external senses, nor do they give us notice of material existance. They are inodorous, invisible, intangible, inaudable, tasteless.

10. Toxicological poisons administered in the maximum act with mortal force and without considerable lapse of time. Rabies canina

forms an exception to this rule. Infants may be exposed to the continuous action of the pathogenic poisons of cholera, yellow fever, diphtheria, etc., for weeks and finally suffer a slight attack, whilst the most powerful and robust subjects may fall victims after a single day's exposure in the same apartment.

11. Feeble toxicological poison produce feeble effects on the powerful physical organism, and it is not possible for them, generally to cat otherwise. It is not at all improbable that the obscure pathogenic poisons of yellow fever for instance, may be intrinsically an extremely feeble agent, acting on variable susceptabilities. The same may apply to the pathogenic poison of cholera, determining its violence, rendering small-pox distinct or confluent in the same apartment and in the same manner determining the intensity of scarlet fever as simple angenose, or malignant.

12. The existance of pathogenic poison is merely inferential, they having no sensible properties, nor have we, apart from animal matter, any conception of the material cause of variola, rubeola, equinea, or syphilis, no such substance as variolon, rubeolon, equinon, or syphilon ever having been either discerned, or heard of. Dr. Mitchell claims to have discovered septon it is true, but little has been heard of it since his time. The existence of certain external entities determining yellow fever, cholera, etc., is an *ex itœcessato rei* and the only circumstance, which renders such conclusion inevitable is the mere ultimate, naked and inexplicable fact of the disease prevailing in one locality and not in another, declaring a local cause.

13. Toxicological poisons exhibits curative and therapeutical, as well as morbid effects, are employed as antidotes to each other, and act any number of times on the same subject. Pathogenic poisons are purely morbid, and are without therapeutic power. They merely as in small-pox, yellow fever, etc., confer immunity against a second attack.

The data on which it has been attempted to explain the origin of pestilential diseases, by the condition of the atmosphere in relation to ozone, are at once simply inadmisable. As a scientific achievement the disclosures in relation to ozone are most curious and important, but the etiology of epidemics has not advanced a single step thereby. Later investigations appear to have given a very satisfactory explanation of the nature of ozone, showing beyond a

doubt that it is merely oxygen gas rendered chemically active and corrosive like chlorine, bromine, etc., by the action of electricity, and by this means from being inodorous and unirritating it acquires a strong odor and chemical activity, like these elementary bodies. Nothing, however, is known of this electrized oxygen on the animal economy, save that which relates to it as a toxicological agent. Sconben and others having shown that it is highly oppressive to the lungs, and that small animals are speedily killed by it. The pathogenic power of either the hyper-ozonic or an-ozonic states of the atmosphere in the production of epidemics, comes to us with no other reason or recommendation than the appearance of novelty, for the electrical etiology is not new. It is said that certain coincidences have been observed to exist between the existance of epidemics and the showings of ozone-scope. The whole circle of reputed causes can boast of equally strong coincidences, and by same system of reasoning, the whole might be proven to be true, at the same time, however contradictory these reported causes might be. A hundred contradictory causes, doubtless remain to be discovered, with equally invariable coincidences. The invalidity of the ozonic theory may be ligitimately inferred, without our going out of the chemical labaratory. The azone of natures labratory cannot differ from that observed by the chemist. An abnormal state of the atmospheric oxygen must necessarily be visited alike on all; and were such a thing possible as a dangerous hyper, azonisis of the atmosphere, the result would be necessarily an universal poisoning effect, as veritably toxicological as could be produced by chlorine gas. Whatever evils on the other hand might be produced by the an-azonic state must be equally uniform and toxicological. The strong would not be destroyed, and the weak spared, as is often seen in epidemics. The contrary of these positions can never be taken for granted. It must be proven. Nothing but the strongest and most positive proof can ever be admitted to establish the ozonic explanation of epidemic diseases. The pathogenic poisons of cholera, yellow fever, etc., are endured with habitudes, which wholly differ from anything which has ever been discovered, and by nothing which has been discovered can these diseases be excited so far as is known. "Nothing but direct experimental proof can be admitted. The pathogenic power can never be admitted on a weaker proof

than the toxicological. Both require demonstration and the former is disproven by the latter."

Whilst influenza may be defined to be an "epidemic catarrh," yet it is not improper to speak of an "epidemic influenza," because influenza may prevail in an epidemic, endemic, or sporadic form. In the epidemic form, it is usually more asthenic in its character than in either its endemic or sporadic form. I believe the tonsils to be the tissue usually found primarily affected; but I do not deny that laryngitis, trachitis, and even pharyngitis, may follow quickly and closely on the idiopathic or primary tonsillitis.

Several eminent German writers consider diphtheria to be of parasitic origin, and one powerful advocate of the cryptogamic origin is found in the late Professor I. K. Mitchell, of Philadelphia. The conclusions of Professor Hallier we do not accept, for three reasons: First, because the fluids sent to him were not put up with proper precaution for the exclusion of extraneous spores; second, because the culture apparatus used by him does not give reliable results, as we have found by experiment; and lastly, because his reasoning is based upon a peculiar theory of his own, that parencellium, mucus, etc., are merely unripe forms of certain cartilaginous fungi—a theory that cannot be discussed here, but of which it is sufficient to say that it has been accepted by no other mycologist. The statement of Dr. Stiles, that the fungous origin of all zymotic diseases is now conceded by the highest authorities in mycological research, will, no doubt, surprise the said authorities; for Berkley, Curtis, and DeBarry, the highest authorities in England, America, and Germany, most assuredly concede nothing of the kind. In reference to the parasitic origin of epidemic diseases, Dr. Leidy truly says: "In many animals, entozoa and entophyta are almost never absent, and probably, when in their natural habitation, and few in number, or not of excessive size, are harmless."

Many important diseases have been supposed to originate from parasitic animals and vegetables. The former are not the true entozoa, for they are too large, and may be detected by the naked eye; but they are considered to be animalculæ so small that they cannot be discerned even by the highest powers of the microscope. But, independent of the fact that the existence of such entities is a mere suspicion, none of the well-known animalculæ are poisonous.

At various times I have purposely swallowed large draughts of water containing myriads of monas, vibrio enzlenia, volcox leucophyn, votacella, etc., without ever having perceived any subsequent effect. The production of certain diseases, however, through the agency of entophyta, is no longer a subject of doubt, as in the case of the muscardeum in the silk-worm, mycodem of prurigo-favosa in man, etc.; but that malarial and epidemic diseases have their origin in cryptogamic vegetable or spores, requires a yet simple proof. If such were the case, minute vegetables and spores, conveyed through the air, and introduced into the body by respiration, could be detected. The minutest of all known living things is the vibrio leneola of Moller, measuring only the 36,000 of an inch, and the smallest known vegetable spore is very much larger than this, whilst particles of inorganic matter can be distinguished the 200,000 of an inch in size. I have frequently examined the rains and dews of localities in which intermittents were epidemic, upon the Schuylkill and Susquehannah rivers, but without being able to detect animalculæ, spores, or even any solid particles whatever. I have examined the air itself for such bodies, by passing a current through clear water. Ordinarily, when the atmosphere was still, early in the morning or in the evening, neither spores nor animalculæ could be detected. When piles of decaying sticks or dry leaves were stirred up, or the dust was blown about by the wind, a host of most incongruous objects would be obtained from the air—none, however, which could be supposed capable of producing disease.

To assent, under these circumstances, that there are spores and animalculæ capable of giving rise to epidemics, such as diphtheria, but not discernible by any means at our command, is absurd, as it is only saying, in other words, that such spores and animalculæ are liquid, and dissolved in the air, or in a condition of chemical solution. That the air may be poisoned by matter incapable of detection by the chemist, is proven by the emanations from plants, as the rhus senem hippomane, maricella, etc.

The violence of diphtheria appears to be equally aggravated by domestic uncleanliness, certain predisposing individual conditions, and want of hygienic arrangements. In other words, it owes its origin and successful propagation to the same laws we have found

governing all other epidemic diseases, requiring an exciting and a predisposing cause, as we find to be the case in typhus and typhoid fevers, to reproduce itself. Its origin is the result of a pathogenic poison, invisible, intangible, and as yet unknown.

The following, from the pen of Dr. Henry Hartshorne, is so valuable that, if he had never written another word upon medical science, it is of itself sufficient to immortalize his name:

"*Mode of Propagation.*—The leading facts in the etiological history of diphtheria are that it is usually epidemic, and that its visitations are remarkably limited, 'acting with intensity in confined centres'—as a small village, a crowded school, a numerous family, often inflicting thereon a terrible loss, as a sort of domestic panic and pestilence.

"The name diphtheria is derived from the Greek word διφθερα, a prepared skin or hide. It is well understood to be a modification sanctioned, though not suggested, by Dr. Farr, the English registrar general of diphtheritis, which was introduced by Bretonneau, of Tours, in 1826. Other appellations, by which the same affection has been at different times and places recognized, are: Ulcus Egypticum, angina maligna, angina pellicularis, angina cum tumore, glossitis, putrid sore throat, pseudo-membranous pharyngitis, etc.

"Very little allusion was made to this disease in medical works or journals, especially in America, within the twenty-five years preceding the last four or five. Some may have even supposed that a term so much in use at present, so rarely before, indicated the advent of a new disease; but a little inquiry shows that is far from being the case. I find that quite a list of distinguished authors may be quoted who have described pseudo-membranous inflammation of the fauces and pharynx, with or without laryngeal extension, and this is the definition of diphtheria. The earliest of these authors was Aractus, of Cappadocia—probably a cotemporary of the Emperor Vespasian—who describes, as an Egyptian and Syrian epidemic, an ulcerative affection of the tonsils, in which they are covered with a white, livid, or black crust, and in which death mostly took place by asphyxia, preceded by loss of voice. The only other ancient authors who appear to have distinctly alluded to it are Macrobius and Cachus Aurelian.

"In more modern times, Canevola, at Naples, in 1620, and Ghisi,

of Cremora, in 1740, gave accounts of its epidemic prevalence, the latter being the first to discern the pseudo-membranous nature of the deposit peculiar to the disease. In Spain, amongst others, Lomazo, of Madrid, described it in 1622, giving it the name of *garotillo.* In France, it was discussed by Chomel, in 1749; by Gueinser, in 1821; and by Bretonneau, in 1825—the name of the latter having been since that time especially identified with it. The earliest English writers who are quoted as alluding to it are Huxham, in 1757, Fittergill, about the same period, and Cheyne, who distinguished it from croup, 1801. To these we may add Rosen, in Sweden, 1761; Albert and others, in Germany; and in this country, Samuel Baird, of New York, 1761, and Stephen Brown, 1828.

"Of the more recent medical writers who have dealt with it, the principal ones are Roche, Valleux, Grissolle, Rilliot and Barthez, Trousseau, Isambert, Bouchent, Empis, and Begnorel, in France; Frederick Rokitansky and Virchow, in Germany; Wolson, Hallam Greenhow, Wade, Harley, Laycock, Rogers, Simson, Bristowe, Hart, and Saunderson, in England."

In this country, the malady has been a less frequent visitant. I have had but a poor chance to ascertain what place it has in our recent medical literature, but mention must be made of Hustin Hunt and Jacobi, of New York, and the able paper of Dr. Geddings, of Charleston, S. C.; of Professor John P. Harrison, of Mississippi; and of the account given by Dr. Fourgeand, of Sacramento, of a severe epidemic of diphtheria in California, in 1856–7. Drs. Wood, Condie, and J. F. Meigs, of Philadelphia, and Slade, of New Jersey, give, in their respective treatises, a good account of the disease. I must not forget to mention the valuable experiments of Dr. Tucker, of Baltimore, who fell a martyr to the disease whilst engaged in conducting his interesting experiments. To Dr. James B. McCaw, Thomas Pollard, and the late David H. Tucker, of Richmond, Virginia, we are indebted for valuable monographs on diphtheria. We have from the pen of Charles Minor, M.D., University of Virginia, a most valuable paper on diphtheria. I must name J. W. Claiborne, J. Herbert Claiborne, J. H. Duval, of Petersburg, and R. W. Paxon, of Dinwiddie, as gentlemen who have contributed valuable papers on diphtheria. I have no doubt there are other gentlemen, in my own and neighboring States, who have like-

wise contributed to the history of this disease, whose papers are alike creditable to themselves and to their mother States; but, unfortunately for me, I could not place my hands on their recorded articles during the preparation of this paper.

The principal epidemics of diphtheria have been as follows: In Rome (described by Maccobius), A. D. 380; in Holland, 1337; at Paris, 1376; Naples, 1618–19; in Spain, 1620–22; in Sweden, 1761; in France, in 1810. In America, its earliest prevalence was in New York. It has been, since 1818, often localized in France, Spain, and Germany, and occasionally in England. The most important late epidemics of it have been those of Paris and Boulogne, in 1855–7, and its migratory invasion of England, passing from the southeast to the northwest. In this country, only a few cases attracted attention in 1857–8. We have a direct account of its having prevailed extensively in New York, Albany, Newark, Iowa City, Lynchburg, Waynesburg, and very fatally in Highland county, Virginia. Since 1857–8, I may say it has ravaged the whole Piedmont region of Virginia.

Semeiology.—The premonitory symptoms of diphtheria are much the same in its different forms, only varying in degrees and duration. They are languor, malaise, anorexia, swelling of the lymphatic glands behind the jaw, and slight sore throat. For convenience of description, we may classify the cases as they occur, into simple, croupous, ulcerative, and malignant diphtheria. All of these forms are more frequent and fatal in children than in adults. The simple variety is at once the mildest and most common of all the epidemics recorded. Its symptoms, described in brief, are fever, headache, furred tongue, constipation, dysphagia, with swollen and red or purplish tonsils, palate and fauces; upon one, or sometimes both, of the tonsils, often as early as the second or third day of the attack, a white or yellowish-white pseudo-membranous deposit being seen. The deposit softens and falls off spontaneously in a few days, or it may be removed by local appliances, sometimes forming again. Its removal leaves no ulceration or abrasion of surface behind it. The duration of the whole attack is from five to nine days, and the prognosis is favorable.

The croupous form is that which has proved so fatal in England and in our own country, and, so far as we can judge, elsewhere. I

should estimate nine-tenths of those cases terminating fatally to be of the croupous variety. It is especially frequent in children—most of all after measles and scarlatina—following, when idiopathic, the same prodromata as those observed in the simple variety, although generally more violent. From the beginning, a severe dysphagia comes on, with a yellowish-white, leathery exudation over the tonsils and fauces, the tissues of which, under or around the deposit, are reddened or swollen. The entrance of the disease to the larynx, which may often take place quite early, is marked by the usual symptoms of croup, in the cough, voice, and breathing, which it were needless to describe here. A fatal result takes place, in very many cases, in from two to five or six days, by asphyxia, although it is not impossible for recovery to occur by the expulsion of the membrane.

The ulcerative form is the one which (when destructive ulceration of the palate and tonsils has occurred, with dark-greenish colored and pulpy exudation, and some extravasation of blood, perhaps actual hemorrhage) has sometimes been mistaken for gangrene, and may have thus given rise to some of the familiar descriptions of gangrenous or putrid sore throat. At the same time, the occasional occurrence of true gangrene cannot be denied. M. Basquerol has given an account of an epidemic at the "Hospital des Enfans Maladies," in Paris, in 1841, in which many such cases occurred. The term septic diphtheria is applied by some writers to this type of the disease. The ulcerative is perhaps less fatal than the croupous variety, but it may undoubtedly destroy life, or, failing in this, leave the structure of the palate considerably impaired. Huxham described, in 1757, an epidemic of "ulcerous sore throat," occurring in Cornwall; and curiously enough, several towns in Cornwall, in later years, have been the seat of similar ulcerative epidemics, described by Dr. Burdon Sanderson, in an essay on diphtheria.

The malignant type is attended, at its commencement, by extreme headache, sometimes by vomiting (which is uncommon in the milder varieties), and by hemorrhage from the nose, rectum, mouth, etc. Great dysphagia occurs, and enormous engorgement of the submaxillary, parotid and cervical glands. The tonsils, pharynx and palate are covered thickly with a yellow or brownish, leathery deposit, soon becoming of an offensive odor. The tonsils may sup-

purate, or even slough. The nostrils are sometimes also involved. Extreme adynamia comes on at an early period, with a very rapid pulse, livid pallor of the face, and at first morbid heat, followed by clammy coldness of the skin, and coma often precedes death. Such cases may terminate fatally in three, four or five days, occasionally in *one* or *two*, sometimes, by the potency of the constitutional impressions, before the local affection has been fully developed.

Besides the symptoms which have been thus briefly enumerated, albuminuria is generally present in severe, and often in mild, cases of either form of diphtheria. This was first found out by Mr. Wade, of Birmingham, England. It occurs early in the attack,—is *not*, as has been shown by Dr. Burdon Saunderson, attended by any deficiency of the excretion of urea, and is, therefore, no indication of the dependence of comotose symptoms, which sometimes occur upon the state of the kidneys.

One more variety of diphtheria must be mentioned, which is less common than either of those which have just been described. It is the cutaneous—*i. e.*, pseudo-membranous inflammation of one or more parts of the integuments connected especially with wounds, etc. This has been observed repeatedly in France, having been described by Trousseau in 1830; by Robin in 1847. The sequelae of diphtheria has been especially studied by Drs. Fause, Moevyamt, Bonelton, LaGrange, Grill and Kinssford. They are great and long combined debility, loathing of food, paralysis of the soft palate, and general paralysis. In the latter, vision, deglutition and articulation, as well as locomotion may be involved. Death sometimes follows in a few weeks, but in a number of instances, recovery has occurred, etc., from three to eight months.

Morbid Anatomy.—The pellicular or pseudo-membranous, concretion, found upon a highly injected and tumified surface, or degenerate ulcerative, constitutes the anatomical peculiarity of the disease. This pseudo-membrane has been shown to be a coagulation of fibrin. A remarkable observation of M. Empris, of Paris, proved its independence after exudation of the tissues upon which it is thrown out—viz., that it concreted repeatedly and distinctly, within a tube left in the larynx after tracheotomy. Examined minutely the pellicle or membrane is found to vary from one-twentieth to one-eight of an inch in thickness, and to be fibro-laminated, *i. e.*, consisting of layers

of net-work, including epithelial cells, and exhibiting on its cell surface, exudation corpuscles, or pyoid, globules and granules, which forms appear to be only stages of degeneration. No process of developement or organization occurs on the mass, it is aplastic. In some cases only a granular, superficial infiltration of the epithelium is observed. The ordinary deposit of diphtheria differs from the membrane of sporadic or idiopathic croup, and still more from the coaguable lymph of inflamed serous surfaces in being thicker, more tough, more yellow and less capable of organization. Dr. Burdon Saunderson, however, found evidences of developement of the exudation in one or two specimens of the simple type of diphtheria. Bretonneau, and afterward Dr. Saunderson, imitated the diphtheritic exudation, by injecting an oleaginous preparation of cantharis into the throats of animals. The only observable difference between the two exudations was the absence, in the diphtheritic, of a tendency to organization, which was evident in the cantharidal pseudo-membrane. There would appear, in some of the cases of diphtheria, especially in those described by the German writers, an infiltration of the tissue of the mucous membrane itself; while in other instances a corrosive property secures to the exudation, causing a loss of substance in the parts in which it rests. This is especially dwelt upon by Rokitansky. In this connection, I will mention that, in 1852, I had the honor of presenting to the old Medical Society of Virginia a most beautiful, and perhaps perfect, specimen of "tubular false membrane." It was greatly admired by the members of the American Medical Association, none of whom had ever seen anything of the kind the equal of this specimen. In the July number of the *Stethescope* for the year 1852, you will find a record of the case from which this specimen was obtained by me. The intensity of the inflammatory process would hardly seem alone capable of accounting for the character of the diphtheritic exudation. It is more probable they are owing to a modification of the blastema, dependent upon the general state of the blood—a view suggested of the phrase used in the first edition of Rokitansky's great work, "filumous crasis." The second and third varieties of croupous exudation of that work compared very nearly with the description of the diphtheritic deposit given by various observers. In one particular, however, a difference is notable. The German pathologist

mentions as one characteristic of all "croupous exudations," the often slight vascularity of the diseased texture. In diphtheria, the tissue of the fauces, tonsils, and pharynx, is always highly vascular.

The comparative history of these exudations oblige us to recognize in them an exception to the general rule of Paget, that the proportion of fibrin in an inflammatory lymph, and the fewer its corpuscles, the greater the probability of its organization, and, of course, the less of its degeneration. The diphtheritic exudation is especially fibrinous, and characteristically prone to degeneration. We are led thus to lean more to the view of Rokitansky, which dwells with greater emphasis upon the quality of the fibrin itself, as dependent upon the state of the blood, and to bear in mind the importance of the circumstances which determine, in the corpuscles of lymph, whether they shall undergo development or degenerative change.

In regard to the pathology of diphtheria (as names are arbitrary while things persist), we must ask, first, whether we are agreed to include under the term all affections in which a more or less tenacious concretion is observed in the mouth or throat—such as croup, aphthous inflammation, and thrush, or muguet; or whether we shall reserve the name diphtheria for a certain special disorder, usually epidemic or endemic, and differing pathologically and chemically from either of the diseases to which the above names are commonly applied. Notwithstanding the confusion which has existed in the works, especially of the early French writers, upon the subject, I believe the time has fully come for adopting the latter of these alternatives. I believe diphtheria to be a special toxicæmia or dyscrasia, with a peculiar inflammation as its local manifestation, having analogy in this respect to erysipelas, puerperal fever, the exanthemata, etc.; and, in illustrating the proposition common to many writers, but very well expressed by Paget, that each morbid condition is prone both to produce an inflammation in a certain part, and to give to that inflammation a certain form or character. Basing our methods of diagnosis upon the same principles, we must hold that diphtheria is to be distinguished from scarlatina, from croup, from thrush, and from aphthous inflammation of the fauces and throat. Much debate has occurred in regard to its identity or non-

identity with scarlet fever. Without going into an argument, it may suffice to quote the testimony of a late writer in the *British and Foreign Medico-Chirurgical Review*, that notwithstanding the fact that the diseases are often associated in a remarkable manner, abundant evidence has now been collected in England, that scarlatina is as distinct from diphtheria as from measles or small-pox. Diphtheria has prevailed when scarlatina had not been known for years, and mild epidemics of the one have occurred in coincidence with fatal epidemics of the other. In these early symptoms, moreover, there is a clear distinction in the eruption of scarlatina and in the peculiar punctated or brick-dust like flush of the throat and fauces, and strawberry tongue of that disease. The fact that, instead of preventing it, an attack of scarlet fever, as well as measles, predisposes to diphtheria, is established, and important.

From idiopathic inflammatory croup, as described by most writers since Horne and Cheyne—*i. e.*, that pseudo-membranous, laryngeal trachitis—we distinguish diphtheria by the following traits: Inflammatory croup is a sporadic and sthenic phlegmasia, in which constitutional symptoms are dependent as any inflammation upon the local affection; diphtheria is a *constitutional* disease, usually epidemic or endemic, in which the local symptoms are secondary to the general disorder. More directly in practice, we mark the difference between the two, in the commencement of the pseudo-membranous inflammation, in the region of the tonsils and pharynx, in diphtheria, instead of the trachea or larynx, as in croup, and in the fact that generally, when it invades the air-passages, the exudation does not, in diphtheria, extend to the trachea, but is confined to the larynx. At the same time, the symptoms resulting from such an extension are exactly those for which the designation croupal, or croupous, has been found the most convenient. Vogel asserted that the oidium albicani of muguet was to be found in the pellicle of diphtheria; but Dr. Laycock, Harley, Rogers, and others, have shown that the occurrence of this parasite, or of the lipthonia vuccalis, is, in diphtheria, merely accidental, and far from general. Diphtheria may, moreover, be distinguished from thrush by the commencement of the latter in the mouth, by the patches of exudation in diphtheria being much larger and thicker, and by the greater severity, usually, of the constitutional symptoms attending

the diphtheritic attack. Thrush is also much less common in adults than diphtheria, and it is not epidemic. Roche and even Bretonneau have evidently confounded aphthous inflammation with diphtheria. The former of these writers states that the peculiar exudation of diphtheritis (angina conenneuse) is always at first vesicular. By universal consent at present, this character, with the smallness of the resulting ulcerations and their occurrence chiefly in the mouth, and in very young children, suffices to separate aphthæ from diphtheria.

Is diphtheria contagious? In my opinion, if you mean to signify by the term contagious a disease that transmits its own disease from one subject to another by direct contact without the assistance of any susceptibility or predisposing cause on the part of the patient, I should then say it was not contagious, and that very few epidemic or endemic diseases were so, strictly speaking. But if you mean by "contagious" to signify a disease from which exhalations or emanations may arise during its progress, capable of exciting a similar disease in those exposed to the influence of these noxious exhalations, or rather these deoxygenizing emanations, then I will say diphtheria is contagious, and most of these, epidemic and endemic, are more or less contagious, only requiring for their successful propagation that a susceptibility or predisposition should be furnished by the system. Diphtheria being the product of a pathogenic poison generated by climatic alternations or atmospheric distemperature. But in place of my own opinions, I will proceed to give you the different and conflicting authorities of this interesting subject: Guessert, Bretonneau, Vallein, Trousseau, Barthey, Bard and others have attempted to prove that it is contagious, whilst many others think it atmospheric. Dr Condie, Flint and others, have not been able to make up their minds upon this subject. The facts the contagionists appeal to are such as these: Two physicians, M. Herpen and Gendron, were attacked by the disease immediately after receiving on their faces a portion of diphtheritic matter coughed up by their patients. A soldier at Avignon using the teaspoon of a diphtheritic patient had buceal diphtheria. A boy in one of the French hospitals treading barefoot upon the spittal of a patient suffering with the disease, had psudo-membranous inflammation of the foot. On the other hand, Trousseau failed entirely to inoc-

ulate himself, and some of his pupils with the pseudo-membranous matter, and Harley's experiments with animals were equally without results. So far as my opinion is concerned, these experiments prove nothing. In my opinion, to successfully transmit disease from one to another by inoculation, it requires that the matter should be capable of undergoing in the system some kind of fermentation, or be injected into a vein, or thrown into the system with some force. I am lead to the above conclusion from the fact that I kept a cage full of rattle-snakes for six years in my office; inoculated dogs, cats and fowls, frequently and carefully with the virus; indeed, becoming emboldened by repeated failure, I inserted a little of the poisonous virus in my own arm, without ever having succeeded in producing any effect whatever. But let the snake itself bite the same animals or fowls, and you would quickly see its poisonous effect. The hypodermic method might produce a different result. The self-determining manner of migration of the disease moreover presents difficulties analagous to those connected with the history of cholera in the way of the theory of personal transmission, so that even those who insist most strongly upon its contagiousness are obliged to admit that its movements and invasions are by no means dependent upon such conveyance from individual to individual. It presents, in fact, a problem of great complication to the epidemiologists. The following graphic account upon the subject of its migrations is from the polished pen of Mr. Earnest Hart, of London. "It visited," said he, "the open hamlets of the rural districts, and the crowded courts of the great cities; it reached the seaside, and fell with violence upon the infant population of Boulogne; it raged alike under the intense heat of Summer and during the cold Winter months; its ravages affected equally the inhabitants of marshy, ill-drained lands, and those of dry and elevated positions. Brighton has not escaped; Leasborough has suffered. It has swept across the marshy lowlands of Essex, and the bleak moors of Yorkshire; it has traversed the flowery lanes of Devon, and the wild flats of Cornwall that are swept by the sea-breeze. It has seated itself upon the banks of the Thames; scaled the romantic heights of the North Wales, and has descended into the cornish mines." The only cosmic influences which appear to exhibit any promotive agency in the development,

are excessive alternations of temperature, and of the barometic state of the atmosphere. Like other zymotic diseases, it attacks with the greatest malignancy those places in which the public, and especially domestic hygiene are neglected or imperfect. The poor are therefore the greastest sufferers. But it is by no means restricted to them or to their dwellings. The effeminate influences of luxury and indolence unite it also to the homes of the affluent, where debility of constitution appears to supply the place of a fowl atmosphere, as a predisposing cause. The question which especially remains for solution is whether there exists for diphtheriâ a special morbific poison (as is the case of small-pox, autumnal fever, yellow fever, etc.), the introduction of which into the body is necessary to the production of the disease, or whether a combination of conditional causes (circumfusa), material and dynamia induce this without any such direct toxæmia, but rather as a dyscrasia or diathic affection. Having no time to dwell on this inquiry, I would merely suggest that in the whole range of nosology, the nearest analogy to diphtheria appears to be presented in erysipelas, in the relations of which—in origin, at once to the state of atmospheric, and to the state of the surface (and system at large) of the patient affected—we see much that is instructive and deserving of careful consideration.

It is probable that the infection of these two diseases may be found to have a similar rationale, and to be subject to the same laws of development and prevention.

Treatment.—Watson, Wood, Condie, C. F. Meigs and others, especially of the early writers, assert their confidence in the use of mercury with local applications. Some of the above and other writers commend the treatment with an emetic of antimony, and afterward in small or moderate doses. Bleeding from the arm in selected cases has been recommended by a few; leeching at the commencement of comparatively sthenic cases is advocated. Saline purgatives in the early stages are also approved by some. But the treatment upon which France and England have now most generally agreed, consists of the chlorate of potassa and tincture chloride iron, and the equally important employment of strong solutions of the nitrate of silver; grs. xxx to ℥j of water; or hydrochloric acid, equal parts, mixed with honey, or of Labarraque's chlorated

solution ℥iss. to ℥x. water, fully and frequently applied to the throat, with the additional use of emetics in the croupal variety, and of stimulants in the most malignant type. I had been very much engaged in attending upon the sick soldiers of the late Confederate States Army, and returning to my office after night (located at that time in the village of Paris, Fauquier county, Va.), on the 17th day of November, 1862, I was immediately called to see Eveline, a fine, healthy, likely, colored woman, aged 26. I had seen her two days before in robust health; I found her having apparently undergone a remarkable loss of flesh for so short a time. She was tremulous, her countenance was anxious, haggard, her breathing laborious, stridulous, her body cold, her bowels constipated, mind clouded, pulse, 120, soft, weak, and she was very rapidly approaching to a comatose condition. The lymphatic glands of the throat were much swollen; gave evidence of having received a profound and sudden shock to her nervous system. The virus of the crotolus introduced into her system probably would not have produced a more prompt and decided shock to the great "nerve centres" of her system. And it is this "shock," in my opinion, that draws the grand distinction line of demarcation between diphtheria and all the other augnia. I am rather astonished to find no author speaks of the shock to the nervous system in diphtheria. It is always present, always perceivable; for, in the mildest form of the disease, the *little patients* will be found to "tremble." With some difficulty I prized open her mouth, pressed upon the base of the tongue with the handle of a spoon, and saw the tonsils, and the fauces covered with patches of a dirty, yellowish, white, leathery exudation, beneath which ulcers of a greenish, white color could be detected, and at the same time I saw my first case of diphtheria in this portion of the Piedmont region of Virginia. The palate and fauces were covered also with the same exudation beneath which the ulcerative process progressing could be perceived. I prescribed for this case (without any idea of any amelioration) according to the most urgent symptoms, and to prevent the evident tendency to death. I rubbed her chest and throat with equal parts of hartshorn and olive oil; cauterized her throat patiently and thoroughly with saturated solution, arg. nitris. Her throat to be mopped out aftarward every three hours with the fol-

lowing mixture: ℞. chlorate potassa, ʒii.; armenian bole, ʒij.; mel despumata, ʒj.; aqua roseæ, ʒviiij.; mixed. To take every four hours, teaspoonful mur. tinct. ferri, and chlorate potassa, equal parts. Gave ten grs. pulv. jalap in strong coffee, without cream or sugar; to be followed in ten hours by sulph. quinine, grs. xxx; quinine to be repeated early next morning; aqua vitæ to be used freely; buttermilk, half water, at pleasure.

September 18, 12 *M.*—Is much relieved; bowels freely moved by the jalap; ulcers loosing their green dirty appearance; breathing improved; anxious expression of countenance passing off.

℞. Sulp. quinine, grs. x., morning, noon and night. Chlorate potassa and m. t. ferri to be continued, to gargle the throat with the solution chlor. potassa, etc. Nourishing fluid diet at will.

September 19, 1 *P. M.*—Is convalescing rapidly. ℞. Hot toddy four or five times in 24 hours; regimen continued with the internal remedies, in small doses; no relapse.

I was called on the 30th day of September, 1862, out of my immediate neighborhood to the family of Mr. N. L——, reached his house late at night, and found three of his children dead in the house, and five of the remaining members of his white family extremely ill with diphtheria, so much so, that I learned their cases were by the attending physician deemed hopeless. The mother and one of the living little boys were of the croupal variety, the three remaining cases were of the ulcerative variety and exhibited symptoms, closely resembling those of the colored woman Eveline. I made enquiry for the attending physician, learned he was "up-stairs," had retired, disheartened, broken down, and had left the request that "I should take charge of all the sick without any reference to him." I learned from the aunt, a most intelligent young lady, that she was "mopping out" the patients' throats every hour with a sturated solution of argentic nitratis, and was giving them a dose of sulphate of quinine, containing about one grain per dose; they had been vomited and purged freely; dismay and dispair was plainly and indelibly stamped upon the features of the mother and these sweet little children. I peremptorily ordered the mopping stopped. I gave them all, according to age, enough morphia to insure a few hours sleep, and to allay all the local and general irritation I could, which I considered had been increased, and "kept up" by the fre-

quency, of the application of the strong solution of caustic. In its place I substituted the following wash for the throat: ℞. Chlorate potassa, ℥ii.; aqua rosæ, ℥viii.; syrup quince seed, ℥ii.; sulp. morphia, grs. iv. Mixed. Apply to the throat as a wash or gargle every four or five hours. Tinct. iron and chlorate potassa to be taken in full doses, morning, noon and night, with 20 grs. sulp. quinine every fourth hour if awake, according to age, the 20 grains being issued as the standard adult dose. French brandy, old apple brandy or whisky to be given pro re nata. Rub the lymphatic glands, throat and chest with the following liniment: ℞. aqua ammonia, oleum oreganum, a a, ℥iv.; tinct. lyttae ℥ss. Mixed. Rub well night and morning, nourishing liquid diet as much as they will take without being forced upon them. Just about the break of day, when I thought I was through, and just about to request to be allowed to lie down, Mr. L. approached me, and said: "Doctor, we have been in such a state of excitement and confusion that I have had no time to see after my blacks, my servant woman you just saw says some of them are sick. Wont you go down to the cabins and prescribe for them? Accordingly, I went down, carefully and patiently, examining the throats of the blacks, old and young. In this large lot of negroes, I found nineteen serious cases of diphtheria. There were several other cases amongst them where the "shock" to the sensorium was so slight that I only thought it necessary to prescribe a gargle of chloride of sodium, and the bowels opened, if necessary, by the pulv. jalapæ in strong coffee. The remaining nineteen cases, I cauterized their throats once thoroughly (and only once) with a saturated solution of nitrate of silver; opened their bowels (when necessary) with pulv. jalap in coffee. After the cauterization the throats to be mopped with the following solution three times in the twenty-four hours: ℞. chlorate potassa, pulv. gum arabic, loaf sugar, a a, ℥ij.; aqua rosæ, ℥viii. Mixed or used as a gargle. Chest, throat and glands to be rubbed with soluble liniment, and in some cases the throat and glands were ordered painted over with tinct. iodine fort. twice a day, then every four hours. To take chlorate potassa and m. t. iron and quinine in free doses, or Labarraque's chloriated solution, as preferred, with a free allowance of apple brandy or whisky, and a nourishing liquid diet. This constituted the greater part of the treatment adopted

in these cases. I remained three days and nights at this house, and when I left I had the great satisfaction of knowing that without a single exception they were canvalescing rapidly. There were no subsequent relapses, and no deaths after I took charge of these sick. In the space of ten days, there was hardly a farm-house in my whole section that could not furnish several cases of diphtheria. It prevailed in every variety and form, although the ulcerative variety was the most common form to be met with, I found it to be decidedly asthenic in its character, and large doses of quinine and the stimulants and sustaining remedies were better borne in this "epidemic" and in the chronic diarrhœa of the war, than in any other diseases I have ever encountered. I repeatedly gave in this epidemic from thirty to sixty grains sulph. quinine, or half a pint of strong brandy, and believe I often saved the lives of my patients by so doing. The more profound and sudden the "shock" to the great "nerve centres," "paripassu," the larger the dose of stimulants required. It struck down the robust, in apparent good health, with all the suddenness and violence of a toxicological poison. Its depressing influence on the heart's action was equally profound and sudden. It required for its successful treatment to be met early and promptly with enormous doses of quinine, ammonia, whisky and other well-known stimulants. I gave repeatedly from thirty to sixty grains sulph. quinine with the happiest effects. Apple brandy or whisky could be drank with the same impunity as water.

In this epidemic of 1862, as it prevailed in this section of the Piedmont region, nothing but the most powerful stimulants, decided sedatives, and proper sustaining remedies, were at all admissible in its treatment. A man had as well attempt to put out the flames of a house on fire, as to attempt to stay the devastating progress of that terrible epidemic with his finely-constructed atomizers, and their pleasant and inefficient "sprays" of titania, etc. I would consider calomel hurtful in each and every-sized dose. I can but look upon emetics (more especially of antimonia et potassa tartras) as contraindicated in the treatment of epidemic diphtheria. As long as the blood is sufficiently arterialized, there seems in the croupal variety to be no immediate danger; but so soon as the countenance shows a want of oxygenized blood (by turning bluish),

the danger becomes imminent. I think all emetics tend to increase this deoxygenation of the blood, and are therefore, in every variety of diphtheria, inadmissible in its treatment. Moreover, I do not like this plan of "blowing hot" and "blowing cold" at the same time, in prescribing your remedies. If diphtheria is an asthenic disease, all depletents, relaxents and depressents are hurtful, and stimulants, sustaining remedies beneficial;—if sthenic, stimulants, sedatives and sustaining remedies hurtful, and depletents, relaxents (such emetics) and depressents of service, and become the remedies for its proper treatment. So I can see no reason for blending different classes of remedial agents together in the treatment of diphtheria. I would no more think of attempting to bleed a patient in diphtheria than I would a patient prostrated from the bite of a poisonous reptile.

I have never found as much benefit from the local application of tincture of iodine as I would expect to, from the high praise bestowed upon it by many intelligent physicians. I think, of all the local applications, nitrate of silver is the best—to be applied thoroughly once, but only once, and then followed by mild, detergent and demulcent gargles. The next best local application to the nitrate of silver is the proto-sulphate of iron; and then I should say comes the carbolic acid, valuable as a local application. There is one internal remedy, in addition to those enumerated by me (which I have never used) that I think would prove itself invaluable in the treatment of this disease. I allude to the hydrate of chloral.

It will be seen, by what I have before said, that I believe the origin of diphtheria is from a pathogenic poison, generated by as yet an indefinable atmospheric distemperature, as depressing in its influence upon the heart's action and vital energies as the virus of the rattlesnake proves itself to be when introduced into the system of the mammalia. Whilst a perfect antidote has been long since discovered for the poisonous virus of the snake, none as yet has been discovered for the specific poison producing the strange, yet terrible disease, nosologically known as diphtheria. This disease can count distinguished victims by the thousand—victims to its fearful ravages. The death of General Washington and the Empress Josephine are attributed to it; Washington's death incor-

rectly, I think. Upon careful reading of the case prepared by the attending physicians, Drs. Dick and Craig, and the consulting physician, Dr. Gustavus Broun, of Potobacco, Maryland, I am satisfied this great and good man died from a "sporadic attack of sthenic tonsillitis," or common "quinsey." Josephine died either of the croupons variety of diphtheria, or from membranous croup. Some of the German writers, converts to the theory of the cryptogamous origin of diphtheria, are very decided in their recommendation of the "inhalation of bromine" for the treatment of diphtheria. Others, again, say it is better to combine equal proportions of "bromide of potassium" with the bromine. In our own county a most distinguished physician and surgeon has presented a very valuable paper, full of successful calculations, showing the great value of the inhalation of bromine in the treatment of this disease. Whilst I am not (by any means) a convert to the cryptogamous theory of this disease, yet, from my limited experience with the "inhalation of bromine," I am disposed to think highly of the remedial powers of this agent. I attribute its virtues, however, to its acting as a stimulant, generally and locally, to the diseased parts, just as I have seen a cloth dipped in aqua ammonia, and applied to the throat and chest, of equal value in membranous croup and diphtheria; causing the patient to cough up the false membrane in both of these terrible diseases. In the last month I have seen six or seven cases in my own practice of diphtheria, all being of the croupal variety, and all yielding to the plan of treatment as sketched by me for the treatment of asthenic diphtheria. Some cases occurred called diphtheria, which I placed to the credit of epidemic tonsillitis. I was called a few days ago in consultation to see a handsome little boy, six years of age. His physician was treating him with bilious purgatives, and with chlorate potash and quinine in minute doses, and vomiting him with ipecac, and applying a solution of argenti nitratis to the throat. He remarked to me that he thought him better since the last vomit had been given. He was quiet, composed, rational, and from his general appearance, one might have supposed there was but little the matter with the poor little fellow. His pulse was soft, compressible, slightly flagging, skin cool and moist, his throat apparently not very bad, but the exudation was extending downwards, and the countenance began

to show a *bluish tint* in appearance. I gave my unfavorable prognosis, but advised free doses quinine, mur. tinct. ferri and whisky with soothing gargles and the "inhalation of bromine" in place of the further use of the nitrate of silver. The change was not made, and the little fellow succumbed within twenty-four hours from the time I saw him. I am persuaded the chief difficulty to the rational and systematic treatment of diphtheria lies in the fact that the physician does not, at the outset of the disease, thoroughly satisfy himself as to whether he has an "asthenic" or a "sthenic" case to deal with. If really "sthenic," use your lancet, your bilious purgatives, your emetics, your relaxants and your depletants,—and remedies generally, for here they are right and proper; but if the case is on the other hand, "asthenic," you must forego this class of remedies entirely, and rely upon stimulants, sedatives and the sustaining remedies. But do not mix your remedial agents; don't build your patients up a little by one remedy, whilst you pull them down a little with another. I wish it to be distinctly remembered that I am speaking of diphtheria as it occurred in the more mountainous regions of Piedmont Virginia; that I am ever mindful of the wonderful influence locality, etc., has upon epidemics. To prove this, I have only to quote from Dr. Honeyman on epidemic scarlatina. He is speaking of the dropsy following scarlatina, and says: "In this epidemic, digitalis, after proper preparation by the lancet, and sometimes aided by cupping and blistering, was just as much a specific as ever quinine was in my hands for intermittent fever." Strange to say, in an epidemic of scarlatina, in Piedmont Virginia (occurring at the same time) for the dropsy, following scarlatina, I found tonic doses of quinine never fail to act as *the* specific, and bleeding and digitalis would assuredly have proved fatal. As I have before said, there is an epidemic disease called "tonsillitis," sporadic cases of which do often take on a sthenic type. Membranous croup is also sthenic in its character. Nor am I prepared to deny that from some extraneous circumstances the serous membranes may not become involved in diphtheria as metastasis to the arachnoid of the brain; for instance, when the antiphlogistic remedies would undoubtedly be demanded.

But, nevertheless, from my experience, from analogy, and from all other sources of information accessible to me, I must say, if a

physician recommends depletants in diphtheria, I simply doubt the correctness of his diagnosis, and believe he has confounded a case of membranous croup (it may be wearing some of the habiliments of diphtheria), with genuine diphtheria, which is always and everywhere an "asthenic" disease of the worst decided type, whose effect is a profound "shock," given as a sudden blow to the "great nerve centres," and whose secondary effect is as a "blood poisoner." I have seen the strong and manly heart cease to beat forever under the depressing influence of this subtle pathogenic poison, as suddenly as I ever saw it succumb to the deadly virus of poisonous reptilian. In a recent essay on diphtheria, the author draws a strongly-colored picture of the cruelty inflicted by the ignorant practitioner upon the poor, dear babies in his section. Whilst I have and do now accord general merit to the essay, I should nevertheless feel that I had done injustice to the noble profession of which I am an humble member, were I not to enter my solemn protest against such passages as the following. He says: "I have seen so much pain upon the young child, I have seen so much suffering inflicted and so much danger ensue by ramming a sponge or mop down the sensitive throat of a struggling baby, that I am sure I shall be throwing my influence in the scale of humanity by counseling entire abstinence from local treatment in the infant. Who has not observed the piteous and hopeless gaze of horror the young child fixes on the relentless knight of the probang, who approaches to repeat the suffocation of mopping? If the persecuted children could only speak, what a cry would go up to the merciless doctor. Let us die in peace. And let us not push a rude probang down the throat, and may be into the larynx, and through the vocal cords, possibly, in the vain hope of *punching* off and ramming home the pseudo-membrane, which is obstructing the ways of deglutition and respiration. And this leads us to the immitable caustic, for, of course, no doctor would think of ramming a sponge down a child's throat, whether into the pharynx or larynx (and who can tell which it goes into?), without dipping it first into a saturated solution of nitrate of silver." It is with genuine pleasure that I have to inform the medical profession of my own and sister States, that up here in Piedmont Virginia, where the sun shines brightly, and the sky is blue; where the water ripples down the

hills and valleys in concert with the birds caroling their sweet songs upon each bough and tree, or speck of green foliage; where the young lambs frisk and gambol, and the cattle low in the velvety, emerald green fields, and the little child prattles gaily on the doctor's knee; where we have a little common sense and some discriminating judgment, these terrible blunders and horrid cruelties are unpracticed and unknown. It is at least presumable that our author never witnessed (as I have more than once) the late distinguished Dr. Horace Green catheterize the lungs for tuberculosis. But let us give a little authority as we go along. This plan of topical meditation to which M. Troussau alludes in his communication, was first brought before the profession of France in a paper presented by M. Troussau to the Academy of Medicine of Paris, in one of the sittings of that body in 1857, and which was entitled "An Easy Method of Entering the Air-Passages, in order to Catheterize them, or to Extract False Membrane; to Dilate the Glottis; to Introduce Substances used in the Treatment of Croup, either in the form of Liquid or Powder." This operation of catheterism of the larynx, says Professor Trousseau, is considered a very good means of taking the place of tracheotomy, and at all events should be tried before practicing that operation. On the reading of the paper of Loiscan before the Academy, M. Trousseau and Blanch were appointed a commission to report on the same, and their report made at a subsequent meeting was highly favorable to the plan of Loiscan, and was unanimously adopted by the Academy. The discussion that followed the report of the commission is of great interest. M. Depaul, alluding in the discussion to the declaration of the commission, that the process of catheterism of the larynx, as had been proposed, was very difficult of performance, said: "But I mention nothing is easier than this catheterism for those who have performed it a certain number of times." He did not "consider it equal in value to tracheotomy." "The operation of tracheotomy upon the larynx," said M. Piorry, "for diseases which are most frequently only secondary, are perhaps too much esteemed." In these cases the operation only shortens life, for they are useless in curing the primary disease. The operation of M. Loiscan, which at last is exempt from the dangers of tracheotomy, is preferable to the last. M. Velpeau declared that to M. Loiscan

"belonged the merit of having called attention to the subject." "Thanks to his memory," he continued, "we know that croup can be cured without operating for tracheotomy." That is a great deal. "I believe the operation recommended by M. Loiscan is a good one."

While diphtheritis is at the opening of the air-passages, it is curable, and M. Loiscan has ascertained that it is not difficult to carry medications into the larynx. The learned writer of the Gazette Medicale de Paris, in alluding to the discussion of the Academy, says of laryngeal cauterization: "As a therapeutical means it merits more serious attention. It is a powerful energetic means—the only one which up to this time has succeeded. When the disease is limited to the upper part of the air-passages, we cauterize, and *all* practitioners agree that this means is truly of great benefit. What is laryngeal cauterization other than carrying beyond the limits of ordinary cauterization in a remedy *recognized* as good, efficacious, not only against the *essence* of the disease itself, but also against the *pathological secretion?* Laryngeal cauterization is then in this respect much superior to tracheotomy. Experience seems already to have confirmed these theoretical hopes; future experience will say much more of it." The beneficial results of cauterization in diphtheria is almost universally concurred in, and to-day as a topical application in the disease the nitrate argenti stands without a peer.

I claim no originality in the preparation of this paper, but have endeavored to make it an interesting compilation. I thought something of the kind was needed by the busy practitioner of medicine, and at some trouble I have tried to supply what I thought was demanded by the profession at the present time.

Subcutaneous Injections.—Dr. Constantin Paul recommends glycerine as a dissolvent for subcutaneous injections. He considers it to be far superior to water, alcohol, etc.; it is neutral, can be kept easily, and is, of all liquids, the one which approaches the nearest to the composition of subcutaneous cellular tissue. Glycerine is, indeed, almost a normal substance for cellulo-adipose tissues.—*Lancet.*

SULPHATE OF ATROPIA IN EPHIDROSIS PROFUSA.

BY C. H. TIDD, M.D., MIDDLEPORT, OHIO.

The action of atropia as a narcotic, is too well understood by the profession in general to demand a reiteration at this time, as are also its general therapeutical actions, but there is one property which it possesses, which is not so generally understood, and it is to this that I would call attention in this article, hoping that in so doing I may be enabled to suggest a remedy to my fellow practitioners, that will prove valuable in instances where the usually employed agents have signally failed. I refer to its powers as an "*hydrotic*" and hope to present the subject in a manner at once so concise and clear, that it will recommend itsef to the reader.

The action of atropia in checking the secretion of milk in the parturient woman, naturally led the profession to test its powers, in checking the secretions of other glands as well as of mucous membranes. Dr. Wilhelm Ebstein speaks highly of it as an agent in the treatment of salivation and says: "When I give my patient a hypodermic injection of 0.0016 atropia, I assure him a perfect nights rest, which would be else impossible on his constantly saturated pillow." Sidney Ringer, M.D., in an article in the *Practitioner, Aug.*, 1872, reports his experience in a large number of cases, in which he used the belladonna liniment, externally, with marked benefit. In the course of his investigations he concluded that the agent acted by absoption, and began to administer belladonna internally, but did not derive the same degree of benefit from it when given in this manner, as when applied locally, probably from the fact that when given internally so much less quantity was taken into the system, that the full therapeutical effects of the agents were not obtained. But later in the same year Dr. Ringer began to experiment with the alkaloid atropia, and found equally as good if not much better effects follow its administration (when given hypodermically) than was observed by the local administration of the tinct. belladonna. He says: "Our observations lead us to conclude that $\frac{1}{100}$ of a grain of atropia injected hypodermically, is sufficient in most cases to check sweating for one night."

The writer has in one or two instances checked the sweating of

the head of young children, by having them washed in a weak solution of fl. ext. belladonna, say 3 to 5 drops to the ounce of water, and have seen no ill effects follow its use, and the good effects seem so far to be permanent.

Dr. Ringer, in the *Practitioner* says: By rubbing the ointment or liniment of belladonna *in*, two or three times a day, he has checked the profuse sweating of the hands, which prove so disagreeable to the patient.

Mr. C. A. Nawkivell reports the following experiment performed in University College Hospital: "To a middle-aged woman suffering from acute rheumatism, a hot air bath was administered, followed by cold sponging. This caused her to sweat so freely that, for several hours after the perspiration continued to pour down her face, soaking her clothes, and the bed-linen. While in this state, $\frac{1}{100}$ of a grain of atropia was subcutaneously injected into her arm, and in about a minute the perspiration ceased, and for two hours her skin continued dry, and she felt much cooler, but in the evening rather free perspiration returned." He says: We next gave a young man a Turkish bath, and Mr. Johnson, the resident assistant of wards, joined him in the hot chamber, both sweated freely, and then each was injected with $\frac{1}{100}$ of a grain of atropia, and in little more than a minute the skin became dry, and the perspiration did not return upon the application of the cold douche, nor afterwards. Mr. J. remarked, that so dry did his skin seem that he felt he should never sweat again. "They both suffered from dryness of the mouth but their pupils were not dilated." They next placed a boy in the hot air bath, the temperature rising to 180° fahr., and when sweating freely, they injected the $\frac{1}{120}$ of a grain of atropia, and almost immediately the sweating ceased and did not return again."

"They next placed a lad in the hot air bath of 194° Fahr., and when perspiring profusely, injected $\frac{1}{300}$ grain of atropia. In five minutes the perspiration was decidedly less, and in ten minutes was very slight, but in thirteen minutes it again became profuse, they then injected another $\frac{1}{300}$ of a grain, and in two minutes his face became perfectly dry and remained so during the remainder of the bath, *i. e.* ten minutes.

We find also reports from reliable sources, where it has been suc-

cessfully tried in the night sweats of phthisis and in every case the sleep was better and the cough less troublesome, although generally a disagreeable dryness of the throat followed, but which soon passed off. I deem it unnecessary here to tabulate the cases, as probably most or all of my readers have noticed the reports. Yet there is one farther report which I must introduce at the expense of making this article longer than I had intended.

Dr. Fräutzel,* in a paper on the subject, published in Virchow's *Archir*, vol. 78, part I. Allgemeine Medicin, Central Zeitung, August 2, states "that, having given it to seventy-five patients, he has arrived at the conclusion that it is a remedy which he can confidently recommend, not only in phthisical sweating, but also in that which attends other diseased conditions, such as acute articular rheumatism and convalescence from trichinosis. Among the seventy-five cases were fifteen of more or less recent cheesy pneumonia, of whom all had more or less fever with night sweats; forty-eight of distinct pulmonary phthisis, of whom forty-two had hectic; one of acute articular rheumatism with high fever; two of ulcerative endocorditis, and two of trichinosis. In the first fifteen patients sweating was in six completely arrested; in seven much diminished; in two there was no change. In the forty-eight phthisical cases, the medicine had no effect in five; in twenty-one the sweating was remarkably abated, and in twenty-two it disappeared entirely. Several of the patients in whom atropia failed were near death when it was given. In the eight cases of rheumatism the atrophia gave permanent relief in five; in two it produced a marked diminution of the sweats; in one it was useless. In one of the cases of ulcerative endocarditis it proved useful, not so in the other. In the two cases of trichinosis the cessation of the acute stage of the disease and of the hectic fever attending it, was followed without any rise of temperature by profuse night sweats. Sulphate of atropia in doses of a milligramme (0.15 grain) was given two hours before the expected access of sweating daily, for five days in succession in one case, and for three days in the other; the result being that the sweats entirely disappeared from the first evening it was given. In one of the cases of rheumatism in a man aged 32, nearly all the large joints of the upper and lower limbs had been severely affected

* British Medical Journal, November 29th, 1873.

during five days; the patient was covered with sudamina, and when seen by Dr. Fräutzel was bathed in sweat. A milligramme of sulphate of atropia was given immediately, and very soon there was an abatement of the sweating which in two hours disappeared. It returned during the night, but ceased the next forenoon after the administration of a similar dose. The atropia was thenceforth given regularly night and morning with the effect of completely preventing the sweating, the fever lasted 14 days. In another case of acute articular rheumatism the atropia was given first in doses of one, then of two milligrammes with a similar result, and it is remarked that, on two days in the course of the disease on which it was omitted, the sweating returned. The atropia was given according to the following formula: ℞. Sulphate atropia, $\frac{9}{100}$ of a grain; extract of gentian, sufficient to make 10 pills. Dr. Fräutzel has never given larger doses than $\frac{1}{2}$ milligramme (a little less than $\frac{1}{50}$ of a grain) from fear of producing toxic symptoms. In not a few cases, after taking the medicine the patient felt itching in the neck, which however, disappeared in one or two hours. The pupils acted slowly and were sometimes dilated, and in some cases there was muscæ-volitantes. The atropia had to be stopped in four cases on account of diarrhœa, that this was due to the medicine was proved by the fact that it ceased when the atropia was discontinued and reappeared when it was resumed. What the physiological action of atropia is, in arresting sweating, it is difficult to determine. These profuse sweats arise from a relaxation of the walls of the vessels supplied to the sudoriparous glands, and we know that atropia contracts the smallest of these, hence its administration is followed by a reduction of the perspiration, which must continue so long as the system is under the influence of the atropia. If the remedy be continued until the walls of the vessels regain their tonicity it follows naturally that the disease must be conquered. But, some may say, of what use is a remedy that will not entirely remove the disease? We might with the same propriety ask why it is that we continue the use of quinine day after day in the treatment of intermittent fevers, when one large dose will break the force of the paroxysm. The fact that the sweating returns after the effects of the atropia has passed off, and not until then, is an indication to us to push the remedy until we have conquered the disease.

I will add one report of two cases which have recently come under my own observation. Mr. G. who is suffering from phthisis pulmonalis, begged me to give him something to stop his sweating so profusely every night. I prescribed for him the following: ℞. Atropia sulphas, gr. ss; extractum gentiana alc., ℥i. M. ft. pil No. xxx., of which one was to be taken each night. The first night after commencing their use, his sweating was much diminished and the next it did not appear at all, nor has he been troubled since, although he has taken but sixteen of the pills, and another benefit which he derived from their use was, that his bowels which had been obstinately constipated, were so far improved that he now has one or two passages each day.

Case 2.—Mr. B., who from childhood has been troubled with profuse sweating in the arm pits, so that, (unless he wore a pad,) he would spoil a cloth coat in a very short time, staining it so that it was not fit to be worn. I prescribed for him: ℞. Atropia sulphas, grs. ij; ad. ℥i. M. To be applied to the arm pits, twice daily, by sponging. Under the use of the remedy the sweating was stopped, or at least so changed in character and smell that it ceased to annoy him. Each of us have chances almost daily to try this agent, and I hope to see reports from time to time from those under whose observations this may fall, for by these means is knowledge promulgated, and our profession advanced.

CAFFIENE IN HEADACHE, (MIGRAINE.)

BY T. CURTIS SMITH, M.D., MIDDLEPORT, OHIO.

Migraine is the bane of happiness with very many persons. I will not stop here to discuss the opinions of its pathology, farther than to mention briefly some opinions held in regard to its nature. Ainstie holds it to be a strictly neurotic disease, generally occurring in persons who possess a conganital imperfection in the nerve centres especially the medulla oblongata, and that it is closely akin to or of the same class as epilepsy, asthma, angina pectoris, etc., and that it is only accidental whether the discrasia is manifested in one or the other of these forms of disease.*

*Practitioner for 1873.

Dr. D. N. Kinsman, of Ohio, believes it strictly a neurotic disease, having himself been a subject of it and a close observer of its manifestations.

Clifford Allbut denominates it a nervo-visceral disease.

Chambers and Dale consider it a disease, having its origin in derangements of the chylopoietic viscera.

For myself I believe it to he a strictly neurotic affection, having its primary origin in the nerve centres, especially the roots of the trigeminal nerve, but dissent from the view of Ainstie that it is strictly a neuralgia or that it has any connection direct or indirect with epilepsy, asthma, etc.*

My object in this paper is simply to show the value of caffiene in the treatment of this neurotic affection. Before going farther I will say that I deem nervous and sick headache as one and the same affection, modified in each case according to the temperament, age, habits and conditions of the various organs at the time of the attack. Premising this much, I will now state in brief the effects of caffiene on the physical economy.

It is justly classed among nervous stimulants of which, under certain conditions, it is one of our very best, while in other certain conditions it is very liable to do mischief. To explain, it is a cerebral stimulant and tends to increase the cerebral circulation, hence is of the most value as a nerve tonic, in those cases, where there is cerebral anemia and in those subjects in whom a determination of blood to the brain is not easily effected. It is therefore not a proper agent to administer where cerebral circulation is already too active. I have found it a most valuable nerve stimulant in many instances where formerly I had been in the habit of using such agents as valerian, tr. castor, musk, etc., and, by the way, much more reliable in its results, in well selected cases. An instance: Recently, I saw a patient in the night for a brother practitioner (Dr. N. D. Toby, of W. Columbia, W. Va.) a female, who had been greatly reduced by uterine hemorrhage. She was very feeble, exceedingly nervous and occasionally from accounts of her by the family, was on the point of swooning. A nerve stimulant seemed to be demanded (no hemorrhage now going on) and as she could not take any kind of

*For an expression of my views on this subject, see Medical and Surgical Reporter, of Philadelphia, Pa., for July 12, 1873, page 19.

alcoholic stimulant, I gave her caffiene, which had a happy effect, and on the Doctors arrival next morning the agent was continued. Had the condition of the patient been reversed, some other agent would have been required, as probably ammonia.

The following will, I think, determine the class of cases in which the agent was and was not found well adapted to its use, and are cases taken without selection from my practice and to whom it was administered before I became fully cognizant of its apparent influence over the cerebral determination.

The first case Mr. R——, aet 68, a hard laborer of steady habits, nervous temperament and good constitution for his age, has been all his life the subject of occasional attacks of sick headache (migraine for which he had tried many various remedies, but nothing seemed to answer in the way of relief, but the attacks were usually dissipated by a night's rest. I gave him caffiene at the outset of one of these attacks, which in a few minutes afforded marked relief. I thought little of it at the time, but when another attack occurred he requested another portion which again relieved him. Since that time he has kept it at hand and it has a great many times, either relieved or entirely prevented an attack. In fact he has not to my knowledge ever suffered much from headache since first using the agent, except once, when it could not be obtained. The attacks threaten as often as formerly, but do not culminate in the extreme pain, nausea, vomiting and great prostration that formerly attended or followed every recurrence. In fact, he does not now cease his labor for an attack but takes a dose of caffiene and works away as if in perfect health, nor does he loose a meal. In this instance the effects for good were remarkable and always the same.

Cases two and three were the daughters of the above gentleman, and doubtless inherited the disease. In both cases the agent affords great relief, but not always as well marked as in the case of the father. Very often however, the relief is prompt and effectual.

Case four.—Mrs. L., aet 34, of a highly nervous organization, spare build, habits of system regular, and health generally very good but suffers from migraine every few weeks. I had used for her on various occasions morphia sulp., which relieved the suffering but left ill sequential effects. I resorted to caffiene in July, 1873, for a severe attack from which she was suffering, during which great

nausea came on which was not usual in her case. The effect of the agent, to use her own language was "charming." It seemed to greatly exhilerate the mind and left no bad effects behind it. In several subsequent attacks the caffiene was used with as much advantage as in the first instance.

Case five.—Mrs. C., aet 32, of nervo billious habit, spare build, system reduced in strength by several previous attacks of prolonged illness, married, two children, youngest aet 12 years, catamenia regular but painful, has anteverted uterus of many years standing, bowels always costive. This is one of the class of patients that will follow no plan of treatment more than a very brief period. She is the very frequent subject of migraine, caffiene has been used in her case four different times, but with the effect in every instance of apparently greatly increaseing the head pain and the nausea. She is not plethoric, nor of unusually active cerebral circulation, but the agent is useless in her case, the disease seeming to have its producing cause in the deranged uterine functions.* Morphia alone will afford partial relief, but is followed by vomiting, loss of appetite, etc., for a day or two.

Case six.—Mr. S., aet 36, of plethoric habit, hale and healthy in all respects, except an occasional attack of sick headache, during which he becomes a little pale, very languid and listless, usually vomits before relieved. I gave him caffiene with some misgiving as to the propriety of doing so, but noticing his more than usual palor he was ordered grain doses to be repeated every hour until better or decidedly worse. After the second dose he found himself quite relieved. Since this instance he has always found prompt and nearly perfect relief in a dose of grs. ii., and states that he had never before experienced any relief from any agent used, and many had been resorted to for that purpose.

Case seven.—Mrs. W., of West Virginia, aet 52, has for many years been a great sufferer from nervous headache. She is of nervous habit, broken in health, had used morphia with partial relief. She was ordered caffiene in grain doses every hour until relieved, usually one powder affords prompt and happy effects, and has so far never failed to do so.

*I believe a violation of natures laws regarding reproduction of the species, is the prime cause of trouble in this case.

Case eight.—Mr. B., aet 37, nervous habit, sedentary life, active brain worker, habits of system good, except not being perfectly temperate. Has frequent and extreme attacks of nervous migraine, of a most distressing character. I have ordered for him caffiene in several instances, but every time with the effect of greatly increasing the suffering. In this case nothing but morphia in very large portions will effect relief, and gives much the best results used hypodermically.

Case nine.—Mrs. M., aet 29, married, nervous habit, has four children, youngest, aet four years, a hard worker, habit of system good, with the single exception of occasional attacks of sich headache. She had resorted to so many agents for relief and without benefit that I had difficulty in persuading her to try the caffiene. The first portion, grs. ii., afforded very marked but not perfect relief, but by continuing to use the agent the force of the attacks seem to be well broken and a small dose now affords very good results, and attacks are far less frequent.

The number of these cases could be doubled or trebled in this report, but we deem it needless to give more.

The proportion of failures is about one in four in my hands, taking all the cases promiscuously, but by selection there is much better results. In those where it has failed, relief is usually found in some other agent, as morphia, or potass brom., or the two combined, nux vomica, quinia, or an emetic, according to the nature of the case.

It is scarcely necessary to say that in instances where the stomach is very foul or greatly acid, or any of the secretions greatly deranged, that this difficulty must be removed, but sometimes the caffiene will have a very marked effect for good, even while such difficulties are present.

I usually give from a half grain to two grains, according to the susceptibility of the patient to the action of remedies and according to the amount of tea and coffee habitually used, as those persons who use either of these agents to excess require a larger dose to effect them than those not using them or only doing so to a moderate extent.

I have not attempted to do more in this paper than simply give the results of the treatment of headache by the use of caffiene during

the attack, thus leaving out of view most of the points in the physiological action of the agent, and many points in the general management of migrainous patients, which latter would alone afford material for a very extended article.

WHAT WAS IT?

BY JOHN W. BOOTH, M.D., OF TALLY-HO, N. C.

Dr. Kirkpatrick, in the RECORD for January, 1873, gives a short account of a girl, that went into the creek as she began to menstruate, and stopped the flow which was followed by menorrhagia, etc., but unfortunately he does not give sufficient account of his case, to assist us in treating just such an one or even recognizing it to be the same if we had it. Would not a physical examination have set him right and made him able to decide what it was? The physician is often led to make a mistake, which he can not afford to do, or to let his poor patient suffer unnecessarily, by neglect of these physical examinations.

One practitioner of my acquaintance attended a young married lady, who had never menstruated. She complained of nothing else. He gave her emmenagogues, etc., ad infinitum and wondered what the reason was, but to no purpose. The second doctor that was consulted, by means of his probe in the bladder, and his finger in the rectum, etc., diagnosed the *absence of a uturus* and thereby won laurels for himself, that the first might have worn.

Dr. K's case reminds me of one, that I treated in 1869, in a married lady. The history of her case is as follows: She menstruated early and it was normal and painless. But at the age of 14 she was walking some distance to school, and in autumn, the dews were heavy and the weeds were high on her path, so that she got wet up to her waist every morning, and had to sit with her wet clothes on until they dried. The flow commenced at one time, and was checked by this cause. For a long time afterwards, as I was told by the physician that attended her, she never had any flow, except under the influence of aloetic purges, although she did not suffer any pain or inconvenience from this state of things, and was

unusually robust and athletic girl, weighing not much less than two hundred pounds, and being fond of pedestrian exercise.

She married at about thirty, and after her marriage had no trouble sufficient to make her consult a physician until 1863, some three or four years after her marriage, when she had metrorrhagia for which she took physic with some benefit.

When she came under my care in 1869, she had for some time had no flow during six months at a time, and then had a continuous metrorrhagia more or less for the same length of time.

She had remained sterile and is so yet. She suffered a good deal of pain, in the left hypochondriac and the lumbar region, but had the appearance of a person in perfect health, had a first-rate appetite, and could walk three or four miles with no inconvenience, except some increase of the pain.

On instituting a physical examination I found the uterus retroverted, so as to permit the probe to enter freely when straight. The os was sufficiently patulous to admit the index to the first joint nearly, the anterior lip being somewhat enlarged on account of long standing retroversion. Posteriorly there was ulceration of the os and cervical canal of the granular variety, which bled from the slightest touch.

On account of this bleeding about the os, whenever the probe was introduced, and my inability to elicit tenderness of the organ, I failed to detect corporeal endometritis, until after the former parts were cured. Those of your readers who have made digital explorations of the internal genitals of fat women know that the accumulation of adipose tissue about the vulva places the uterus so much farther off that it greatly increases the difficulty and uncertainty of bimanual palpation. In this case I could not pass the finger farther than the cul-de-sac of Douglas. The fat on the abdomen increased the difficulty of diagnosis.

By the local application of caustics, astringents and alteratives, the inflammation and ulceration were cured after a long time, and the displacement was rectified and the uterus kept in position by a closed lever pessary.

When discharged she was entirely relieved of the pain and metrorrhagia, although she did not menstruate with entire regularity.

Perhaps it would be well here to give an account of a great, and

perhaps unpardonable mistake that I made during the treatment of this case. It will surely reflect no credit on me, but perhaps it may be the means of saving some thoughtless and inexperinced brother from committing the same blunder, and I am sure if it had been some exploit of which I had reason to be proud I should be certain to tell it. In fact, I think we are bound to make our blunders public if the profession at large is probably to be benefited by our doing it.

After the disease of the os had been cured, and it had come down to the size of a goosequill, and when I had introduced the solid stick of argent. nit. into the uterine cavity several times, in order to avoid cauterizing the sound part every time; I introduced a goosequill, cut off at both ends, part of the way, and undertook to push the caustic through the quill, the latter protecting the part from the caustic, and to leave it (the caustic) in the uterine cavity, and strange to say the solid stick in the uterus caused little or no pain.

The plan succeeded admirably, until one day in passing the stick I accidentally pushed the quill entirely out of sight, into the organ.

I tried several expedients for extracting it, to no purpose, until the perspiration was pouring from my scared face, and there lay the poor lady, all unconscious of the danger she was incurring from the unskillfulness of her doctor. Finally an idea flashed into my affrighted mind, and taking a surgeons needle from my case, I turned the point on the sole of my boot, took it in the dressing forceps and delivered her of the goose-quill. I said nothing about it, and grandmother was too busy knitting to notice me.

BRONCHO-VESICULITIS AND BRONCHIAL RHEUMATISM.

BY L. B. ANDERSON, M.D., OF VIRGINIA.

Having, on two occasions, been the subject of bronchitis in two forms, not mentioned, that I have seen, in any medical work, I hope I may be pardoned the necessary egotism of this paper.

During the winter of 1861, I was actively engaged in an extensive and laborious country practice. There was an unusual amount

of sickness in my field, necessitating much exposure both day and night to the very inclement weather. Early in February I had a severe pharyngitis, which was soon followed by laryngitis, and that by bronchitis. During this time I was compelled to stop for a day or two to obtain relief. About the fourth of March, however, all the usual indications of bronchial inflammation save dyspnœa, subsided. There was neither pain or soreness in taking a deep inspiration, but the most oppressive and alarming sense of suffocation. My pulse was feeble, and when still but little accelerated, the slightest exertion, however, hurried it into a rapid and tumultuous tremor, increasing the sense of suffocation to a most painful degree. There was not the slightest inclination to expectorate, but a feeling of perfect dryness from the nasal orifice to the extremist bronchial ramification. In the mean time the whole surface of the body was bathed in a profuse perspiration, and though I was swathed in flannel and kept my room at a temperature bordering on 100° Farenheit; I was constantly chilly; my liver was torpid; bowels constipated; urine high-colored acrid and of a strong garlic odor. I felt that a full cough and free expectoration would relieve me amazingly.

I was cupped, bled, blistered, pustulated. I took mercury, antimony, ipecac, senega, squill and potass. The treatment was continued actively for several weeks, and then with more or less activity for nearly two years. During which time I was examined by many eminent physicians, who could detect no abnormal sounds in my lungs, and were unable to ascertain a pathological condition which would account for the physical state. It was during the busy whirl of war, and the confinement for nearly two years almost constantly to my room, while the whole world seemed ebbing to and fro in ceaseless agitation, drove me to desperation. Though scarcely able to walk unassisted a hundred yards, I went to Richmond and inlisted as a private in a battery, which was about to leave for active operations in western Virginia. I was sent to a surgeon for examination and he could detect no pulmonary disease. While perfectly passive my breathing and pulse were quite natural, but the slightest exertion would accelerate, both to a strange frequency and cause the perspiration to pour from every pore. The doctor was utterly confounded and declared that I was unfit for service, and had better go home and take iron.

I then disclosed to him my status and gave him what I had decided was the pathological condition giving rise to these unusual symptoms, thanking him for his kind advice, and assuring him that I had no doubt that a few doses of iron would terminate my existence.

Returning home, I organized a scouting party which was kept in pretty active employment by the frequent raids which at that day were made into my section. In the course of a few weeks I found myself laboring under the most inveterate jaundice I ever saw. So terrible was the pruritus that I dared not lie on a bed for two months, and though I used the whole catalogue of jaundice remedies, I found no relief until I resorted to the hot bath, and small doses of gamboge and aloes. At the end of eight weeks I was convalescent, and to my great delight I found my lungs almost as sound as ever they were. I must not omit to state, however, that during this attack of jaundice, I was reduced to the merest skeleton, being literally nothing but skin and bones—my hair became almost white, and my whole constitution seemed to have undergone a radical change.

This is a correct history of my case, with all its essential characteristics. The question now arises, what was the pathological condition, from which it sprang? I answer VESICULAR BRONCHITIS.

The inflammation traveling from above downwards, finally reached the air vesicles at the extreme termini of the bronchial tubes, and before measures were employed for its relief, it had produced so much thickening as to preclude in a great measure the action of the air on the blood. There being no inflammation in or exudation from the lining of the bronchial tubes, there were none of the usual signs of bronchitis. The vesicles in the greater part of the right lung, and in no small part of the left being impervious to air, produced the dyspnœa and perfrigeration, and acceleration of pulse in exercise. The wasteing away of the system and the great activity of the absorbents during the jaundice, reduced the vesicles to their nomal status, and that which nearly terminated my existence, restored me to health.

I have seen several cases of the kind since, and am just now recovering from another attack myself. It is worthy of careful study, and prompt attention, for only a few days will result in such

thickening of the vesicles and impairment of the capacity of the lungs, as to foil your best exertions to cure. Active purging, cupping, blistering, and the use of calomel *early* will generally insure relief.

The second form of bronchial disease, of which I have recently been a subjet was marked by the following characteristics: A painful sense of oppression, stricture across the chest, an entire absence of all exhiliration and refreshment from taking a deep inspiration, a sense of unrelief in inspiration as though the air passes through passive tubes, which had no closed extremities, and consequently made no sensible impression upon their delicate lining. In a word, I felt as though *the bottom had fallen out of my lungs.* There was a constant aching very similar to tooth-ache all through the right lung, and a constant disposition to take a deep inspiration. There was no cough, no expectoration, no acute pain, no fever. The urine was high colored and loaded with sediment.

I was freely cupped over the chest; took active purges; used syrup of sanguinaria freely, and kept warmly wrapped in bed, as I felt chilly all the while.

On the third day I awoke early in the morning with entire relief from all the pectoral troubles, but I was suffering with quite a severe pain in my face and head. This in turn passed off during the following night. The following day I rode out in a bleak western wind, and that eveniug all the pulmonary symptoms returned with increased violence. I had some soreness in the bronchia and the aching throughout the right lung was distressing. I was sleepless, feverish, and restless all night. The following day I took sanguinaria freely, cupped heavily, and took a purge. Not having slept for twenty-four hours, I fell asleep at ten o'clock at night and slept profoundly till five o'clock in the morning, awaking entirely relieved. But found myself laboring under a severe lumbago. What was the matter? I answer "bronchial rheumatism." Such cases I had sometimes seen in others, but confess I never had a clear and distinct idea of its pathology before.

CORRESPONDENCE.

BALDWYN, MISS., April 20, 1874.

Editors Southern Medical Record:

In the January number of THE SOUTHERN MEDICAL RECORD, page 46, there is a short article, "*Risks Attending the Use of Bromide of Potassium,*" with two cases reported to sustain the assertion. I am well satisfied that there are "*risks*" in the use of all active or patent remedies, but the risks in the use of a remedial agent ought not to deter a prudent use or trial of such remedies I do not intend to enter into any controversy upon this or any other subject. But wish to offer as a counterpoise a little experince which I have had in the use of the bromide of potassium. From several cases which I have used the article in question, freely, with similar results, will select a case.

Virgil G——, a stout lad, of about fourteen years, was attacked with manifest symptoms of epilepsy in the latter part of the year 1872. The symptoms increased rapidly up to the first of April, 1873. At which time he was having from one to three paroxysms every day. At this time he was presented at my office, for examination and treatment. Finding his general health good, I commenced the use of the pot. brom. in doses of twenty grains each, three times a day. He had but one paroxysm (some weeks after) from the time he commenced taking the remedy, his general health already good, continued to improve. He was anxious to labor but was not permitted to do so, his friends fearing that the exertion would cause a recurrence of the paroxysms. The bromide was taken daily, from April to the close of the year, (nine months) with the most happy effect, two pounds and four ounces having been used. He is now and has been engaged at common labor, from the first of January last, up to this (20th April) time, with no symptom of a return of the epilepsy, in good general health and fine spirits, with no treatment in three and a half months.

I will avail myself of this opportunity to say, that at one time I was not satisfied with the action of the bromide of potassium,

not for its active results, but for what I conceived to be its negative results, from the representations made by what I conceived to be high authority I was led to expect too much and almost abandoned the use of it in disgust, and I might say in mortification and disappointment, but was induced to try it again. I am now convinced that I did not give it a fair trial, and without an attempt to consume time and space, or any theory, feel assured that it is one of the safest tranquilizers that we possess.

A. G. SMYTHE, M.D.

FISSURES IN ANO TREATED WITH IODOFORM.—Dr. Francesco Parona (*Giornale Italiano delle Mal. Ven. e della Pelle*, October,) gives his experience of iodoform in fissures of the anus, and strongly recommends it. He believes it acts in great measures as a local anæsthetic, "which allays the spasm of the sphincter during defæcation, while it favors cicatrisation by neutralizing the irritating effects of fœcal matters which may remain on the ulcerated surface." It has also a direct healing action. Dr. Parona uses the iodoform as an ointment (one part to three of lard), and applies it on a small cylinder of charpie, of a size requiring but little force for its introduction. The charpie has the advantage that its filaments adapt themselves readily to the slight irregularities of the anal mucous membrane. The dressing is changed twice a day, and replaced after each motion, and in the majority of cases the pain and spasm caused by the fissure cease in a few days, and the patient is well in a relatively short time. Of four cases, of which details are given, the longest time was twenty days, while one of the patients had been ill four months previous to the treatment.—*Medical Times and Gazette.*

EXTERNAL TREATMENT OF VARICOSE VEINS.—If Dr. Linon, of Verviers, is right in his reports of his treatment of varicose veins, many who suffer from them will thank him for his discovery, as it saves them the pain and danger of an operation. He says, in the *Tribune Medicale*, that he has for years treated such cases with success by swathing the leg in a flannel compress wet with a solution of chloride of iron in water, forty-five grains to the ounce, and then applying a roller flannel bandage over it firmly for twenty-four hours. This is to be repeated daily for a week or two weeks, when the patient is, or ought to be, well.—*Medical and Surgical Reporter*,

Remarks, Gleanings and Extracts.

BY T. CURTIS SMITH, M.D., OF OHIO.

On Neurosal Headache.—Dr. C. Handfield Jones details ten cases of this disease in the London *Medical Times and Gazette.*

Of these two only were males. This large preponderance on the side of the females, eight to two, is probably accidental, as Dr. Liveing's much larger numbers show the proportion to be about five to four. As to age, four were probably under thirty, and five probably over forty, one about thirty-five. Hereditary tendency to headache was marked in three cases, and may have existed in others where it was not particularly inquired after. Gout was more or less prevalent in the families of cases two, three and ten. Malaria seemed to be the cause in seven. Exhaustion and fatigue acted as provocatives of the attacks in one, four and seven. Visual disorder occurred in one and eight. Hyperæmia of the head was apparent in two, eight and nine. Pallor of the face was marked in seven. As regards the process which conditionates the headache, I am strongly disposed to regard it as consisting essentially in failure of nerve-life, rather than in irregular accumulation and discharge of nerve-force. The state of the sufferers is, for the time, evidently one of prostration; and anything that depresses the general power, either temporarily or permanently, promotes the invasion or rivets the hold of the malady. In case one the patient was evidently over-worked, In case two the attacks were preceded by a sensory paralysis, and their supervention was attended with loss of memory and sense of confusion; moreover, insanity was prevalent in her family. All this points quite in the direction of infirmity or actual failure of nerve-power. Case three was unable to study more than two hours at a time, from brain-fatigue. He had been preparing for examinations. In case four the bad effect of worry and the good effect of recreation were very conspicuous. In case eight nerve-debility was extremely marked, and during the attacks her mental faculties were semi-paralyzed, or rather more. In case nine there was good reason to believe that the sufferer had inherited an infirm nervous system; and there was also the fact, of like import, that she had been laid up for five years with paraplegia, which, as it had disappeared,

was probably a neurosis. In case ten the general condition was one of chronic hyperæsthesia and debility. Good reasons exist, as I have long tried to show, why pain should be regarded as a kind of paralysis, and most of the concomitant phenomena of migraine, the anæsthesia, the occasional paralysis, the loss of memory, the aphasia, the confusion of mental faculties, the giddiness, and even the sickness, seem to me to belong to a state of lowered and deteriorated, not exalted or excited, nerve force. Even should there occur in any instance disorder, such as convulsion, which might be deemed indicative of "irregular accumulation and discharge of nerve-force." I should still regard this as essentially homogeneous with the other symptoms, for the reason that it may fairly be referred to loss of the self-controlling power which belongs to nerve-cells in the state of health. One of the marvels of the living body is that most nerve-cells, while duly supplied with blood, possess not only the power of evolving force, but also of regulating the discharge of that force. An athlete may stand ready for some great effort, with his nerve-cells charged, as it were, with force, or that which can produce force, yet not until the word is given is the energy poured out in forceful action. Surely all was in readiness before; the molecular matter of the nerve-cells continuous with the axis cylinders was on the verge of undergoing active change, yet remained quiescent. Of course this occurs under the influence of the will; but the point to be noted is that the will cannot always control a *deteriorated* organ.—*Medical and Surgical Reporter.*

Ergotin Injections in Prolapsus Ani.—The eminent surgeon, Von Langenbeck, of Berlin announces that he has lately been treating prolapsus ani "with astonishing success" by hypodermic injections of a solution of ergotin (five to fifteen parts to one hundred of distilled water.) He replaces the bowel, and inserting the point of the syringe about three centimetres in depth in the cellular tissue, throws in from one to two grains of ergotin. This should be repeated every three or four days for three or four weeks, any hard fecal masses in the bowels being first removed by a simple injection. As a means of treating a most obstinate and troublesome complaint, this method, sanctioned by so eminent a name, deserves careful repetition.—*Medical and Surgical Reporter.*

Weeping in Children.—M. Trosseau considers it worthy to be considered as an aphorism that an infant is not dangerously ill so long as it sheds tears; and that, on the contrary, absence of weeping indicates a severe disease. He, however, admits that exceptions may occur to this general rule.—*Western Lancet.*

Animal Vaccination.—At the stated meeting of the New York Academy of Medicine, held December 4, 1873, Dr. F. B. Foster read a paper on animal vaccination, submitting the following propositions:

I. Vaccination of the human subject with animal vaccination is attended with a degree of success, as regards the protection of vaccination, equal to that obtained by any other method of vaccination.

II. The vaccina produced by animal vaccination is genuine, and is as thoroughly protective against small-pox as the protection obtained by the use of any other form of vaccination.

III. The use of animal vaccine does not entail the dangers of severe local inflammatory affections, or general febrile complications, generally attributed to it by some writers. The dangers or complications are rare. Some unfortunate results have heen reported relative to subsequent erysipelatous affections; but the same results have been realized from the use of other virus, and the objection does not hold against animal vaccine alone.

IV. Animal vaccine, as equal with humanized vaccine, is capable of preservation for a considerable length of time, for transmission to remote parts.

V. The use of animal vaccine eliminates one of the suspected elements of causing syphilis, and helps to silence the anti-vaccine agitations.

VI. Animal vaccine is the most trustworthy safeguard for the supply of material in emergencies.—*N. Y. Medical Journal.*

A Real Remedy for Onychia Maligna.—A reviewer in the London *Medical Times and Gazette*, speaking of Prof. Vanzetti's monograph on this disease, says:

"It is a happy thing that a remedy has been discovered which does away with all operative procedures, and cures onychia maligna rapidly and painlessly; namely, *nitrate of lead.* Dr. Moorloose, of Gand, was the first to notify this fact, in 1864, and his paper will be found in the *Abeille Medicale* (No. 16, April 17, 1865), but up to 1868 no one else seems to have made trial of it, nor was it mentioned in any work on materia medica and therapeutics except Trousseau and Pidox's 'Traité de Thérapeutique.' In the eleven cases previously mentioned, which came under Dr. Vanzetti's care in 1868–70, nitrate of lead was used, and with unvarying success. Some of the cases got well with one application of the salt in powder to the ulcerated parts; some required two or three dressings. The ulcers soon lose their foul aspect, and granulate in a healthy manner, and then they rapidly heal. Thus one case of a year's standing was well in two weeks; no other treatment was used. And in all the new nail was healthy and perfectly shaped"—*Medical and Surgical Reporter.*

Tractile Method of Reducing Strangulated Hernia.—Dr. Daniel Leasure, of Pittsburgh, Pa., in the *Amer. Jour. of Med. Sci.*, for April, 1864, relates several cases by which the reduction of strangulated hernia was quickly effected after all other tactile efforts had signally failed. Dr. Leasure has practiced this method since 1843, and speaks from personal experience with many cases. The method is to elevate the hips by drawing the limbs over the shoulders of an assistant so that only the head and a little of the shoulders rest on the bed. In other words inverting the erect or standing position of the patient, while the operator presses the contents of the abdomen towards the thorax, and then grasps the hernial tumor as for ordinary taxis, drawing it away from the stricture and if necessary using a little pressure. The doctor states that he has not known this method to fail in effecting reduction, but very properly warns against attempting this method when there is a probability that sphacelation has taken place, as reduction after this occurrence would very likely prove fatal to the patient. He also gives a case where such an accident did occur in the hands of an irregular practitioner.

[We have several times resorted to this method with the most gratifying success, after the taxis had utterly failed in the ordinary positions and methods of reduction. ED.]

Pathognomonic Sign of Pertussis.—M. Bouchut, in the *Revue Medico-Photographique*, states that where pertussis is suspected, if it really exists there will always be found a small ulcer affecting the frenum lingue.—*Clinic.*

REMARKS, GLEANINGS AND EXTRACTS

BY A. R. KILPATRICK, M.D., OF TEXAS.

Fractures of Lower Extremities Treated Without Splints.—Dr. J. F. Atkinson, of Lexington, Mo., in an article in the *Medical and Surgical Reporter*, April 18, 1874, contends that splints are not only useless, but in some cases injurious. He uses sand bags, cold water locally, and in the last stages, pasteboard strips.

[We have been of his opinion for several years, and feel quite satisfied that splints, boxes, etc., are applied too soon in all cases where they are used before deposition of provisional callurs, which is generally near the ninth day. The laity however are hard to satisfy and convince on this point, as they think every minute of delay jeopardises the limb and life of the patient. A general practitioner, where competition is active, would lose practice by attempting to conduct a case on Dr. A's plan.]

Nux Vomica in Obstetrics.—Dr. S. P. Sackett, Ithica, New York, in *Medical and Surgical Reporter*, strongly advocates the use of nux vomica in parturition, in place of morphine, chloroform, chloral, ergot and quinine in any case where these medicines may be indicated. Give three grains of the powder every half hour, and usually three doses will be all that is required. He avers that it alleviates suffering, regulates the pains and facilitates the delivery, obviating the use of forceps. Where the pains are irregular, he gives at once six or eight grains. Equivalent doses of any other form of the medicine can be substituted, where the powder can not be obtained.

Poisoning by Rhus Toxicodendron.—Many cases of this have been reported within the last year, and different plans of treatment, successful and unsuccessful, have been detailed. Acetate of lead lotion, and such remedies as usually relieve eruptions, have either no efficacy, or are injurious. Alkaline washes have a better effect. Some are relieved by bathing the parts with tincture of lobelia seeds. Dr. J. S. Stone, of London county, Va., reports two cases, in which he used a lotion made of carbolic acid, ℥iij; glicerine, ℥ij; water q. s. to make oj, mixture which was applied and gave almost instant relief and in three days they were well.

Guarana for the Cure of Sick Headache.—T. P. Caillouet, of Lockport, La., speaks in very high terms, in the *Phila. Med. News*, January, 1874, of guarana in powder, in doses of ten or fifteen grains, for the complete relief of sick headache. Give a dose every two hours during an attack, and take it as soon as any symptoms come on, as a prophylactic. It relieves many instantly and some have no return for months and years after having used the medicine

The Betel Nut an Anthelmintic.—The inhabitants of Bombay, grate the betel nut, as we do nutmegs, and give a teaspoonful of the powder, floating on milk, or mingled in clarified butter. It is given before breakfast, after the patient has fasted twelve hours, and it acts without any adjuvant, bringing away lumbrici and tape-worms It acts on dogs in the same doses.—*Medical and Surgical Reporter.*

Biliary Calculi Dissolved by Chloroform.—Dr. E. Burd, of Lisbon, Iowa, recommends chloroform in treating cases of impacted biliary calculi, giving fifteen to thirty drops every half hour. He also uses Venice turpentine to one of ether, as a solvent during the interval between paroxysms of the disease.—*Med. and Surg. Reworter*

Ablation of Mammæ Causes Sterility.—A French physician, or scientist removed the mammary glands from several Indian pigs, without any serious injury to the animals, except that they remained sterile.

Hypodermic Injection of Ergotine in Uterine Fibroid.—Professor Hildebrandt, of Königsburg, Germany, states that while using this remedy for metrorrhagia, he discovered it also reduced fibroid tumors which were co-existent. Dr. Beugelsdorf repeated the experiments with similar results, and reports four cases of uterine fibroma which he treated. They both used three parts of watery extract of secale cornutum to seven parts of glycerine and water. The advice is to insert the canula into the muscles and diffusing the fluid by manipulation, so as to prevent phligneous inflammation.

Two years ago I treated a negress aged fifty, large and fleshy, who was suffering with uterine pain and high fever. On digital examination, at the first visit, found the uterus enlarged to the size of a new-born child's head, the os dilated and something protruding from it, with some hemorrhage present. She had been sick some weeks, very much prostrated, and I made no spceular examination, as I thought she would soon die. I used astringent vagical enemata, and gave large doses of tinct. ergot with acet. plumbi, kino and spts. lavender comp. She improved rapidly, and, contrary to expectations, she soon got up. Some few weeks after that she sent for me again, to treat her for remittent fever, and I then supposed that the uterus was involved, and, on exination, discovered that the organ was of normal size and in position, and the tumor I had felt (more than once before) had disappeared. In a few weeks more she moved to another county and I lost sight of her.

Tic-douloureux Cured by Ice.—Dr. B. M. Walker, of Plymouth, N. C., reports, in the April number of *American Journal of Medical Sciences*, a case of a lady, aged sixty, who had been suffering at intervals for over five years, and under treatment, using various remedies and attending mineral springs with only partial and temporary relief. Dr. W. saw where Dr. Winternitz treated a case successfully by the local application of ice. The patient applied the ice directly to the seat of pain, which was in the 5th pair of nerves, at the same time holding brandy in her mouth. Although the pain was regularly paroxysmal and intermittent, it never returned. The ice was kept to the part as long as it could be borne.

Treatment of Chloroform Asphyxiation.—Professor Nelaton, some years ago, relieved a case of this kind, by placing the patient head down and feet up, so as to fill the cerebral congestion. More recently the practice has been adopted and recommended by Doctor Campbell, of Paris. He considers that death arises through syncope due to cerebral anæmia. This plan also tends to drive from the lungs and trachea pent up vapors of chloroform and mucus which were increasing the asphyxia.—*Lancet.*

REMARKS, GLEANINGS AND EXTRACTS

BY S. M. BURNETT, OF TENNESSEE.

Test for Blood.—Dr. Bertholet gives, in the *Amer. Jour. of Med. Sciences*, a very interesting article on the Guaiacum process for the detection of blood as a valuable aid in distinguishing nucleated from non-nucleated blood disks.

The blood of mammals differs from that of other classes of animals in being non-nucleated and in being circular. The disks of the camel and archenia are elliptical but they have no nucleus. It is often of great importance in medico legal cases to determine from what animal blood is derived, and this can only be done by an examination of the disks. The blood in these cases is nearly always dried, and to restore the shrunken cerpucles to their original form is impossible—hence the presence of a nucleus is the only point left on which a positive assertion can be founded. The Guaiacum process is the most reliable for demonstrating the presence of the nucleus that we have. The following method of preceedure is that recommended by Dr. Bertolet: "If a microscopic preparation, mounted in feebly acidulated glycerine or other suitable fluid, is carefully irrigated with a properly prepared alcoholic solution of Guaiacum resin; then when a very small quantity of etherial solution of peroxide of hydrogen (ozonic ether) is introduced beneath the glass cover, a bluing varying from a light sapphire to a deep indigo shade, will be observed in the several corpuscles of mammalian blood. Though the degree of coloration of the different corpuscles presents considerable variety, yet all parts of the individual corpuscle itself are colored uniformly. If the blood has been derived from an animal having *nucleated* corpuscles, an *entirely different* picture is presented; when treated by the same reagents the *nucleus is seen as a sharply defined, dark blue body, while the protoplasm surrounding it assumes a mere delicate violet hue.* Some times the other parts of the blood globulous are not the least colored; in all cases however, the nucleus is deeply stained and easily recognizable when present even by the naked eye."

According to the latest researches the poisonous action of theine and caffiene is very largely expended upon the circulatory system, first stimulating and afterwards paralyzing the nerves of the vasomotor system. This is soon reflected to other portions of the system and we have palpitation, irregular cardiac active, and various nervous symptoms. All this, to say nothing of the effects of the tannin and hot water on the stomach, lurks in the cup that proverbially "cheers but don't inebriate."

Action of Alcohol as a Therapeutic Agent.—In a classical article on "tolerance of disease" in the January number of the *American Practitioner*. Prof. Austin Flint, answers in a nutshell the question. What is the action of alcohol as a therapeutic agent? After giving as accurate a definition of what is meant by "tolerance of disease" as our present knowledge will allow and considering its influence upon the diagnosis and prognosis of disease, he treats of its application to the treatment of disease. In all those affections where the danger of death is from asthenia, it is the duty of the practitioner to husband this tolerance and to avoid all those measures calculated to impair it. "Tonic remedies "he says," have a certain measure of importance as conducive to tolerance. Alcohol has its place of usefulness here. Without discussing the question whether alcohol be a food or a remedy, and divesting the topic of all moral considerations, that it is an important constituent of the supporting treatment must be admitted. Practically, its usefulness as such consists in this; it promotes for a time tolerance; its use is indicated where there is evidence of failure in tolerance; it is often wise to forestall, by its use, failure of tolerance; the urging with which it is indicated is proportionate to the degree of danger from failure of tolerance. The proof of its usefulness is the evidence of increased tolerance without any of the phenomina of alcoholism or excetation."

Poisonous Analine Dyes.—Mr. Wm. Ward, writes to the *Scientific American* that, after eating three or four inches of stick candy, of a red color, he was taken sick with burning pain in his stomach. He grew worse, and in three days was not able to walk about, suffering pain all the time. A physician treated it as a case of aniline poisoning, and under the treatment he rapidly recovered.

Pea-Nut Oil.—The oil obtained from the pea-nut or ground pea, of the Southern States, is said to be an excellent substitute for olive oil, especially for table use, as it keeps a long while without becoming rancid.

Enemata of Bromid. Potass have been recommended in vomiting of pregnancy, beginning with 92 grs. per day, and gradually increased till bromism is produced.

A Good Wash for Chilblains is sulphorous acid, 3 parts; glycerine, 1 part; water, 1 part.

Another Remedy for Hooping-Cough.—This time it is nitric acid, and its advocate is Dr. Berry, in the *London Times and Gazette*. He gives it in doses of from five to ten minims of the dilute acid every three or four hours.

Editorial and Miscellaneous.

Proceedings of the Abingdon Academy of Medicine, Va.

We take great pleasure in publishing the following proceedings of the last annual meeting of the above-named Academy of Medicine. The re-electon of the old officers is a well deserved compliment to their efficiency and excellence in the performance of their duties. The senior editor of the RECORD, in his own behalf, begs leave to return his sincere thanks for the honor so unexpectedly conferred upon him by the Abingdon Academy of Medicine. He hopes it will remain as a memento of mutual regard and friendly fellowship. His heart shall ever go out to his brethren in the dear old Commonwealth and be linked with their sin every enterprise which has for its object the ennobling of the medical profession and moral advancement of Virginia, the land of his birth.

ABINGDON ACADEMY OF MEDICINE.

This society meets the first Monday night in each month, in the town of Abingdon, Washington county, Va. At the last annual meeting, held the first Monday night in April, the following officers were elected for the ensuing year:

DR. E. M. CAMPBELL, President; DR. J. S. APPERSON, Vice-President; DR. W. F. BARR, Corresponding Secretary; DR. R. J. PRESTON, Recording Secretary; DR. H. M. GRANT, Treasurer.

On motion, Dr. J. G. Pepper, was elected a fellow of the Academy.

The following gentlemen were elected honorary fellows:

Drs. J. B. McCaw and F. D. Cunningham, of Richmond, Va.; Dr. T. S. Powell, of Atlanta, Ga., and Dr. Washington L. Atlee, of Philadelphia, Pa.

The following gentlemen were appointed Delegates to the American Medical Association, which meets in Detroit, Michigan, in June, 1874: Drs. William White and J. S. Apperson.

An interesting essay was read by Dr. R. J. Preston, on "Hygiene and Prophylactic Medicine," and a copy was requested to be sent to the editors of the "SOUTHERN MEDICAL RECORD," for publication.

Dr. W. F. Barr, was appointed essayist for the next meeting.

It having been announced to the Academy of Medicine that since its last meeting, Dr. A. R. PRESTON, President, had died, Dr. Wm. White, (the Vice-President, in the chair), appointed Drs. E. M. Campbell and W. F. Barr, a committee to report suitable resolutions on the death of Dr. Preston.

The committee reported the following resolutions, which were unanimously adopted:

TRIBUTE OF RESPECT.

WHEREAS, it has been the will of Almighty God to call from our midst our co-laborer, Dr. A. R. PRESTON, who, at the time of his death, was President of our Academy of Medicine, and the oldest physician of our association; a physician noted for his skill, remarkable for his kindness and gentleness in the sick room, distinguished for his charity to the poor, and his gentlemanly bearing in all the walks of life; while he was an earnest and energetic practitioner, until the infirmities of age caused him, in a measure, to withdraw from the active pursuit of his profession, he scorned any undue advantage to forward him in his vocation; always kind and courteous to his juniors, frank and open with compeers, he died rich with honors as well as ripe in years, having been elected by his fellow-citizens to various positions of honor and trust; therefore,

Resolved, That in the death of our associate our Association has lost its oldest and one of its most esteemed members, and the community a valuable citizen.

Resolved, That while bowing in humble submission to the will of our Master, we deeply deplore the loss of our associate and friend.

Resolved, That a copy of these resolutions be sent to his family, and that they be entered on the record of the Abingdon Academy of Medicine.

Resolved, That a copy of this preamble and these resolutions be published in the Virginia Medical Monthly, Southern Medical Record, and the Abingdon Virginian.

The society then adjourned to meet the first Monday night in May next. W. F. BARR, Cor. Secretary.

Abingdon, Va., April, 1874.

"Fear Not while Acting Justly."

Dr. C.: We sympathise with you in your recent troubles, but be not discouraged—life must have its trials. After all a good man may do in the cause of truth and the right, even then an unjust punishment may be inflicted upon him. It is pleasant to know, however, that such troubles that beset the good man prove at last to be the chained lions of good old Bunyan. God is not asleep; He loves his children; He is on their side against all enemies, whether in the shape of flesh or devils; and, although he may not slay them, as He did the two hundred and fifty princes who rebelled against Moses and Aaron, "with fire from the Lord," or "open the earth and swallow them," as he did Korah Dathan, and Abiram, still God lives and reigns; and he has declared that though hand join in hand, the wicked shall not go unpunished. We are not surprised to hear of certain difficulties. Those who endorse fraud and corruption in others are apt to commit them, and and prove alike unworthy the confidence of honest men. P.

"Do What You Ought, Come What May."

Dr. ——: It is true that the Record is an independent exponent for any and every thing for the general good of the profession, still we do not feel called upon to become the special advocate of any particular cause disconnected with the scope of our journal, no matter what troubles may abide on the side of either contestants. If you feel disposed to send us a communication over your signature, setting forth the facts in the controversy alluded to, we will publish it. While we believe truth left alone will sooner or later destroy error, it is the duty of every good man to uphold it with all his might when proper occasions arise, and to obliterate error and wrong as soon as possible, the sooner that wrong is destroyed the less will be the harm done. To remove the evil is to destroy its effects. The advocates of truth have a peculiar advantage over those of error. The former rises higher continually, but the doers and endorsers of evil things sink daily more and more deeply into the mire of their own infamy. It would be better if all good men could remember that Solomon, under the inspiration of Heaven, taking into view the corruption of the human heart, said "Confidence in an unfaithful man in time of trouble is like a broken tooth and a foot out of joint." P.

American Medical Association.

The twenty-fifth annual session of this body will be held in the city of Detroit, Michigan, on Tuesday, June 2d, 1874. Our views are well known in regard to the objects of this Association. We have been its warmest and strongest defenders at all times and under all circumstances. We are willing to throw the veil of charity over its errors and defects, and bid it God-speed in its noble objects. We deeply regret that circumstances preclude the possibility of our being present at the ensuing meeting. We trust it will be the largest meeting we have ever had, and that many abuses and errors may be corrected; that many steps may be taken forward and upward in the march of progress. The first step towards the correction of abuses is the intimation of their existence. If the members and friends of the Association fail to attend—and occasionally men of mediocre minds and worse morals get admittance and control, misrepresenting the profession of their respective States—the fault is not to be attributed to the body as an Association. Indifference and a little tricking has ruined many a good cause, and we (with scores of the best men in every section) fear, but we will not say more. "All is well that ends well," and we hope the best even when hope promises the least. P.

"It is much better to Reprove Openly than to be in Anger Secretly."

Dr. E.: The most efficient means of getting rid of quacks is to elevate the standard of attainment in the medical colleges. So long as this is low it will be difficult for private members or journalists to accomplish much. Quackery will triumph as long as she sees herself reflected from the colleges. The determination of the members of your Society to make qualification a requisite for fellowship and recognition, in addition to a diploma from a school of character, is a step in the right direction. Stick to it, and it will prove to be true leaven of reform and improvement that will continue to work till the whole mass is leavened. The facilities and means for teaching, and the character of teachers, are of vital importance in this movement of reform. Medical science is rapidly advancing. Colleges should keep pace. If they do not, the time is not far distant when the position you and your Society have

taken will be endorsed by all educated professional men, viz: that a DIPLOMA is not *prima facia* evidence of a *professional education.* To accomplish all you desire, students must be educated, medical institutions must have many facilities, teachers must have learning and character. P.

Association of ex-Confederate Medical Officers.

This Association was organized in Atlanta, Ga., the 20th of May. The attendance was not as large as was expected or desired, but sufficient progress was made to give assurance of success for the future. Late Surgeon General S. P. Moore, of Richmond, Va., was elected President. One Vice-President at large, and one from each of the late Confederate States. Among the latter occur the names of Dr. S. S. Satchwell, of North Carolina, and Dr. V. D. S. Hill, of Mississippi, both of these gentlemen being members of the editorial staff of the RECORD. The crowded condition of our pages must be our excuse for this meager notice of a very important movement for the collection of medical and scientific facts, which otherwise might be lost to the profession. The Association meets at Richmond, Va., on the first Wednesday of July, 1875. G.

Our Original Department, it will be seen, covers the larger portion of this number. We think our readers will be pleased with the character as well as the number of articles published. We desire to say to all our friends that we hope they will not cease to write because they may suppose we are crowded with articles. That we are crowded is true, but we *will always make room for them*—even if we have occassionally, as in this issue, to give up the larger portion of our pages for the purpose. We therefore repeat our invitation to all—*write.* G.

NOTE.—Book notices and receipts crowded out in this issue.

ADVERTISING DEPARTMENT.

We shall, during the coming year, devote only a few pages to our advertising department.

Only first-class houses will be solicited, and we trust, therefore, that our readers will give their patronage and influence to those who use our journal as a medium for introducing their business to the public. We hope that this Department will be examined at each monthly issue, as we have promise of cards from several worthy establishments, and shall, from time to time, introduce new remedies and reliable houses.

The RECORD is unexcelled as an advertising medium, circulating as it does, over an immense territory, and penetrating to sections North and South.

OUR RATES FOR THE ENSUING YEAR WILL BE AS FOLLOWS:

For one page per annum	$100 00
For half page per annum	60 00
For quarter page per annum	30 00
For one page one insertion	15 00
For half page one insertion	10 00
For qnarter page one insertion	7 00
For each line, when so prefered	50

Printed Matter furnished ready for the binder will be inserted at the following rates:

Two printed pages	$2.50 per page each issue
Four " "	2.00 " " " "
Four " " or more	1.50 " " " "

Advertisers in every case will have the privilege of *changing* their advertisements *each issue*, if desired, thus giving them an opportunity each month to bring before our readers, something new and of great interest.

Every advertisement must be paid for within thirty days, when placed in one issue; when by the year and *without change*, the rates and terms will be governed by written contract, and a liberal deduction made. All advertisers will please state how much space they desire, and whether they wish *monthly changes* to be made, or for their advertisements to remain *permanent for one year*.

DETROIT MEDICAL COLLEGE.

Preliminary Term will begin on first Wednesday of September.

Regular Term, on first Wednesday of October.

Clinical Instruction Daily.

For Circular, address

DR. THEODORE A. McGRAW,

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It is no advertising dodge, but a valuable Book which should be in every Doctor's Library. ☞ Send for it. april20—3m

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Castor Oil (one drop Croton Oil). Castor Oil (1-8 gr. Podophyllin). Oil of Male Fern (1-6 gr. Kamala).

Mattico, Mattico and Copaiba, Mattico, Copaiba and Cubebs, Apiol, Chloroform, and other kinds, to which new articles are continually added.

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LANDON B. EDWARDS. M.D., Editor and Proprietor,

Member of the Virginia State Board of Health, Recording Secretary and Treasurer of the Medical Society of Virginia, etc.

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april20—6m

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—TO—

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A PROMINENT New-York Physician lately complained to DUNDAS DICK about his SANDALWOOD OIL CAPSULES, stating that sometimes they almost cured miraculously, but that a patient of his had taken them for some time without the least effect. On being informed that several imitations were made and sold, he promised to inquire, which he did, and found that his patient had been taking Capsules sold in bottles, and the Druggist stated that he could not get D. D. & Co.'s at the time, and had often sold the others instead, supposing that, as they were said to contain the same amouht of OIL OF SANDALWOOD and OIL OF CASSIA as the genuine, they would have the same effect.

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The Soft Capsules are handsomely put up in tin-foil and neat boxes, containing 30 each, and are now the only Capsules prescribed by Physicians.

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